

THOMSON REUTERS KNOWLEDGE DIRECT API

THOMSON REUTERS KNOWLEDGE DIRECT API DEVELOPER'S GUIDE

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chapter 1 Overview

Thomson Reuters Knowledge Direct API (TRKD API) offers a wide range of Thomson Reuters' information and services delivered in a request-response scenario via web services.

Services available via TRKD include quotes, news and charts, as well as value-add data such as Fundamentals, Estimates and Significant Developments. Connectivity can be via HTTP and HTTPS, over the Internet or BT-Radianz/RXN, using today's industry standard protocols (SOAP and XML).

Thomson Reuters Knowledge Direct API is robust and scalable enough to handle traffic from even the most demanding sites while providing highly extensible support abilities to front and back-end infrastructures. The framework of layered architecture components allows for ease of integration and rapid deployment. Furthermore, the disintegration of the traditional user-interface (UI) layer provides for large-scale flexibility to the end-consumers or agents and a full-range of configurable data/information delivery scenarios. This is largely supported through the exposure of standards-based XML/Web infrastructures for platform-independent data exchanges.

The platform employs clusters of micro and macro components that granularly provide its building block definitions. These building blocks are key to the realization of the plug and play functionality model exposed to market participants through services integration or subscription based delivery services.

TRKD API clearly introduces the benefits of maximizing one's best assets to clients (whether information or application-based services), as the platform enables unbounded electronic and information commerce abilities. The TRKD platform provides professional, quality investment information and data access from a singular information source. The platform services model caters to a full breadth and range of decision critical investment information (news, quotes, earnings, for example), as well as an infrastructure that allows for ease of discovery, personalization, navigation and subsequent delivery of information services to a firm.



chapter 2 Preface

This document is intended as a developer's guide for the Thomson Reuters Knowledge Direct API (TRKD API). The guide contains a general introduction, tasks and examples, and coding samples.

2.1 Intended Audience

This document is intended for developers building application using the Thomson Reuters Knowledge Direct API.

This document assumes you are familiar with Web Services and related technologies, including XML and HTTP.

Thomson Reuters Knowledge Direct does not require you to code using any particular technology platform. However, this document does include coding examples as a suggested approach.

2.2 Using this Guide

Begin with the Overview and Getting Started. Then spend a good deal of time with Authentication and Authorization. After you are comfortable with these concepts, you can proceed directly to chapters detailing the specific services you purchased.

Although Thomson Reuters Knowledge Direct does not require you to code using any particular technology platform, this document includes a chapter of coding examples as a suggested approach. You should review these examples before you start coding.

2.3 Where to Get More Information

For more information about Thomson Reuters Knowledge Direct, visit the Customer Zone, <http://www.reuters.com/customer>. Log in and navigate to the Thomson Reuters Knowledge Direct product page.

The Thomson Reuters Knowledge Direct product page includes links to coding samples, FAQs, development support tools, etc. The developer support tools include our Request Builder harness, where you can easily construct API requests and examine responses.

Thomson Reuters Knowledge Direct product page also links to Contact Us, where you can request help from our support staff.

2.4 Customer Zone Setup

It is very important for new TRKD API and Web Views customers to register on the Thomson Reuters Customer Zone and sign up for **Service Alerts** and **Product Change Notifications**. This will ensure that you are notified of upcoming maintenance, service issues, and important product changes.

2.4.1 Accessing Customer Zone

You can access the Thomson Reuters Customer Zone at <http://customers.thomsonreuters.com>.

Keep in mind that your Customer Zone ID and password are different than the login credentials you had received for TRKD API and Web Views. If you do not have a Customer Zone account yet, go to the Customer Zone web-site and register.

2.4.2 Signing up for Service Alerts

When you sign up for service alerts you will promptly receive real-time status of network and service issues as they happen,

and notification of system maintenance.

To sign up for Service Alerts follow these steps:

1. Sign in to the Customer Zone.
2. Go to Alerts and Notifications.
3. Select Service Alerts.
4. Click View service alerts via an Internet connection.
5. Select Edit Subscriptions.

Note: If you have not subscribed to the 'My Alerts' service yet, click the 'Start Subscription Wizard' link to subscribe and personalise alerts.

The TRKD API and Web Views alerts can be found under:

Application -> Financial Information Applications -> Thomson Reuters Knowledge Direct (TRKD):

- Thomson Reuters Knowledge Direct API
- Thomson Reuters Knowledge Direct Web Views

Select both Thomson Reuters Knowledge Direct API and Thomson Reuters Knowledge Direct Web Views and click **Update**.

Go to the **Delivery** menu to choose how you want the alerts to be delivered.

2.4.3 Signing up for Product Change Notifications

When you sign up for Product Change Notifications you will receive updates on new and enhanced functionality, along with important information about product changes that may require action by you.

To sign up for Product Change Notifications, use the following instructions:

1. Go to the **Alerts and Notifications** page.
2. Then click **Product Change Notifications**.
3. Select **My Subscriptions**.
4. Click the **Edit** button.
5. Select **Thomson Reuters Knowledge Direct API**.
6. Specify at least one Client Impact.
7. Click **Submit**.



chapter 3 **Getting Started**

This section provides an introduction to the TRKD API including description of fundamental concepts.

3.1 **Before You Begin**

Before you can begin accessing Thomson Reuters Knowledge Direct API, you must contact Thomson Reuters (<https://customers.reuters.com/crmcontactus/support.asp>) and receive a properly entitled service user credential. Thomson Reuters also gives you an application identification string (appid). This appid is a short descriptive string that uniquely identifies your application.

3.2 **Understanding Service Users, Impersonation (Effective Users)**

You can use a single credential (service user) for all users of your application or support individual user credentials (impersonation through effective users).

The user credential provides the appropriate entitlements (rights) to data from various services. For example, a credential may be limited to estimates from particular regions. A single service user is all you need for applications where all users have the same entitlements.

However, the most common scenario is an application that supports individual user credentials (impersonation through effective users). To accomplish this, your application first creates a service token using your service user credential (CreateServiceToken_Request). Next, with the service token you created, your application makes a second request passing the particular effective user credential (CreateImpersonationToken_Request). The application then passes this impersonation token with each data request.

3.3 **Understanding Application Identification Strings (appids)**

An application identification string (appid) is a short descriptive string that uniquely identifies your application for tracking and entitlement purposes. Thomson Reuters assigns an appid to you during setup. Your application submits this appid with each API request.

3.4 **Understanding Authentication Tokens**

An authentication token is an encrypted, expiring string that securely identifies the service user (or effective user). Your application must pass an authentication token in each web service request.

To create a token representing the service user (service token), use CreateServiceToken_Request. To create a token representing a particular effective user credential (impersonation token), use CreateImpersonationToken_Request. For additional information, see section Authentication and Authorization.

3.5 **An Example API Interaction**

The following demonstrates API requests and responses for an application that displays significant developments.

Step 1: Create a service token

Service endpoint:

<https://api.rkd.reuters.com/api/TokenManagement/TokenManagement.svc/Anonymous>

HTTP headers:

POST api/TokenManagement/TokenManagement.svc HTTP/1.1
 Content-Type: application/soap+xml
 Host: api.rkd.reuters.com

XML Sample Request - Creating a Service Token

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/TokenManagement/TokenManagement.svc/
    Anonymous</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1/
    CreateServiceToken_1</Action>
  </Header>
  <Body>
    <CreateServiceToken_Request_1 xmlns:global="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1" xmlns="http://www.
    reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1">
      <global:ApplicationID>[AppID]</global:ApplicationID>
      <Username>[service user]</Username>
      <Password>[password]</Password>
    </CreateServiceToken_Request_1>
  </Body>
</Envelope>
```

XML Sample Response - Creating a Service Token

```
<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" s:mustUnderstand="1" >http://www.reuters.com/ns/2006/05/01/webservices/
    rkd/TokenManagement_1/CreateServiceToken_1_Reply</a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <CreateServiceToken_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1">
      <Expiration>[token expiration YYYY-MM-DDTHH:MM:SS]</Expiration>
      <Token xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">[service token]</Token>
    </CreateServiceToken_Response_1>
  </Body>
</Envelope>
```

Retrieve the token from the response XML. You should cache the token and reuse it until it expires (90 minutes, by default).

Step 2: Create an impersonation token

Service endpoint:

http://api.rkd.reuters.com/api/TokenManagement/TokenManagement.svc

HTTP headers:

POST api/TokenManagement/TokenManagement.svc HTTP/1.1
 Content-Type: application/soap+xml
 Host: api.rkd.reuters.com

XML Sample Request - Creating an Impersonation Token (Reuters effective user)

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/TokenManagement/TokenManagement.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1/
    CreateImpersonationToken_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
```



```

<CreateImpersonationToken_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1">
  <EffectiveUsername>[effective user]</EffectiveUsername>
</CreateImpersonationToken_Request_1>

</Body>
</Envelope>

```

XML Sample Response - Creating an Impersonation Token (Reuters effective user)

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" s:mustUnderstand="1" >http://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1/CreateImpersonationToken_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <CreateImpersonationToken_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1">
      <Expiration>[token expiration YYYY-MM-DDTHH:MM:SS]</Expiration>
      <Token xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">[impersonation token]</Token>
    </CreateImpersonationToken_Response_1>
  </Body>
</Envelope>

```

Retrieve the token from the response XML. You should cache the token and reuse it until it expires (90 minutes, by default).

Note: You can handle both Step 1 (Creating a Service Token) and Step 2 (Creating Impersonation Token) in one step by calling CreateImpersonationToken_Request_2 operation. See section Creating Service and Impersonation Token in One Request for more information.

Step 3: Request the significant developments

Service endpoint:

http://api.rkd.reuters.com/api/SignificantDevelopments/SignificantDevelopments_1.svc

HTTP headers:

POST api/SignificantDevelopments/SignificantDevelopments_1.svc HTTP/1.1
 Content-Type: application/soap+xml
 Host: api.rkd.reuters.com

XML Sample Request - Significant Development

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/rkd/SignificantDevelopments/SignificantDevelopments.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/rkd/ns/2006/05/01/webservices/rkd/SignificantDevelopments_1/GetSignificantDevelopments_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetSignificantDevelopments_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/SignificantDevelopments_1">
      <FindRequest Significance="1 2 3" MaxNumberOfItems="100">
        <CompanyIdentifiers>
          <RIC Value="rtr.l" />
        </CompanyIdentifiers>
      </FindRequest>
    </GetSignificantDevelopments_Request_1>
  </Body>
</Envelope>

```

XML Sample Response - Significant Development



```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/rkd/SignificantDevelopments_1/
    GetSignificantDevelopments_1Response</a:Action>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetSignificantDevelopments_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/SignificantDevelopments_1">
      <FindResponse>
        <Development>
          <Xrefs>
            <RepNo>A488E</RepNo>
            <DevelopmentId>801980</DevelopmentId>
          </Xrefs>
          <Dates>
            <Source>2006-08-14T23:00:00.0000000-04:00</Source>
            <Initiation>2006-08-16T06:50:42.5200000-04:00</Initiation>
            <LastUpdate>2006-08-22T13:38:12.0100000-04:00</LastUpdate>
          </Dates>
          <Flags>
            <FrontPage>false</FrontPage>
            <Significance>3</Significance>
          </Flags>
          <Topics>
            <Topic1 Code="204">Business Deals</Topic1>
          </Topics>
          <Headline>Reuters Group PLC Closes Deal with Lukoil, Russia's Oil Company</Headline>
          <Description>Reuters Group PLC announced that its Moscow office has closed a deal with Lukoil, Russia's oil company, for 11 Reuters
          3000 Xtra and 21 Reuters Trader for Commodities keystations, with the Russian news service and specialist data.</Description>
        </Development>
      </FindResponse>
    </GetSignificantDevelopments_Response_1>
  </s:Body>
</s:Envelope>

```

3.6 Web Services Standards

TRKD API applies the following Web and Web services standards:

- **HyperText Transfer Protocol (HTTP)** - used as the primary transport for TRKD API. TRKD API supports HTTP compression across all services.
- **HyperText Transfer Protocol Secure (HTTPS)** - can be used by users to provide encrypted communication and secure identification of a network web server for data requests like estimates, news, etc.
- **Secure Sockets Layer (SSL)** - used for HTTP session encryption for token creation request messages, where user credentials would otherwise be an unencrypted plain-text part of the SOAP payload.
- **XML Schema** (<http://www.w3.org/2001/XMLSchema>) - All TRKD API services use XML Schema to describe the structure of the data being exchanged with the client. In addition to being used by clients to understand the nature of the data exchange, XSD schemas are also used for validating SOAP requests.
- **SOAP 1.2** (<http://www.w3.org/2003/05/soap-envelope>) - defines a standard for generic XML data exchange in a way that supports describing metadata along with the service payload data.

Note: SOAP 1.1 is supported as well. See example below.

- **WSDL 1.1** (<http://schemas.xmlsoap.org/wsdl/>) - provides a standard way to describe the service interfaces, access methods, and specific service endpoint locations.
- **WSDL Binding Extension for SOAP 1.2** (<http://schemas.xmlsoap.org/wsdl/soap12/>)
- **WS-Policy** (<http://schemas.xmlsoap.org/ws/2004/09/policy>) - provides a basic framework for how web services describe their policies. The related WS-PolicyAttachments provides mechanisms for describing how WS-Policy based information is described in WSDL documents.
- **WS-Addressing 1.0** (<http://www.w3.org/2005/08/addressing>) - Web Services Addressing provides transport-neutral mechanisms to address Web services and messages
- **WS-Addressing 1.0** - WSDL Binding (<http://www.w3.org/2006/05/addressing/wsdl>) - provides standard XML grammar for how WS-Addressing 1.0 properties are described in WSDL documents.



XML Sample - SOAP 1.1 (Token Rejection Error)

```
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <soap:Fault>
      <faultcode xmlns:a="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Faults_1">a:Request_RejectedException</faultcode>
      <faultstring xml:lang="en-US">Credentials can't be passed via http to service</faultstring>
    </soap:Fault>
  </soap:Body>
</soap:Envelope>
```

For more details on SOAP 1.1, please see the next section.

3.6.1 SOAP 1.1

- To get WSDL addresses for TRKD API services for SOAP 1.1 you can use the following general URL:

General SOAP 1.1 WSDL

[http://api.rkd.reuters.com/schemas/\[ServiceName\]/wsdl/\[ServiceName_Version\]_HttpAndRkdToken_Soap11.wsdl](http://api.rkd.reuters.com/schemas/[ServiceName]/wsdl/[ServiceName_Version]_HttpAndRkdToken_Soap11.wsdl)

Just replace [ServiceName] and [ServiceName_Version] with actual service name and its version, for example:

Quotes SOAP 1.1 WSDL

http://api.rkd.reuters.com/schemas/Quotes/wsdl/Quotes_1_HttpAndRkdToken_Soap11.wsdl

Note: WSDL addresses for SOAP 1.1 contain the '_Soap11' suffix.

- To get service endpoints for SOAP 1.1 you can use the following general URL:

General SOAP 1.1 Service Endpoint

[http://api.rkd.reuters.com/api/\[ServiceName\]/\[ServiceName\].svc/SOAP11](http://api.rkd.reuters.com/api/[ServiceName]/[ServiceName].svc/SOAP11)

Just replace [ServiceName] with the actual service name, for example:

Quotes SOAP 1.1 Service Endpoint

<http://api.rkd.reuters.com/api/Quotes/Quotes.svc/SOAP11>

Note: Service endpoints for SOAP contain the '/SOAP11' suffix.

XML Sample Request - Creating a Service Token Using SOAP 1.1

```
POST https://api.rkd.reuters.com/api/TokenManagement/TokenManagement.svc/soap11/Anonymous HTTP/1.1
Content-Type: text/xml
SOAPAction: http://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1/CreateServiceToken_1
Host: api.rkd.reuters.com
Content-Length: 541
<?xml version="1.0" encoding="utf-8"?>
<Envelope xmlns="http://schemas.xmlsoap.org/soap/envelope/">
  <Header />
  <Body>
    <CreateServiceToken_Request_1 xmlns:global="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1">
      <global:ApplicationID>[AppID]</global:ApplicationID>
      <Username>trkd-demo-wm@thomsonreuters.com</Username>
      <Password>l2l3d46gd</Password>
    </CreateServiceToken_Request_1>
  </Body>
</Envelope>
```

XML Sample Response - Creating a Service Token Using SOAP 1.1

```

HTTP/1.1 200 OK
Date: Tue, 25 Jan 2011 13:05:29 GMT
Server: Microsoft-IIS/6.0
X-Powered-By: ASP.NET
X-AspNet-Version: 2.0.50727
Cache-Control: private
Content-Type: text/xml; charset=utf-8
Via: 1.1 RKDAPI
Connection: Keep-Alive
Content-Length: 587
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body>
    <CreateServiceToken_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1" xmlns:
      global="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <Expiration>[token expiration YYYY-MM-DDTHH:MM:SS]</Expiration>
      <global:Token>[service_token]</global:Token>
    </CreateServiceToken_Response_1>
  </s:Body>
</s:Envelope>

```

3.6.2 HTTP Compression

TRKD API supports HTTP compression across all services and requests.

To implement HTTP compression in your requests, you need to add a single line (in bold in the example below) to the SOAP header:

Required Header - Implementing HTTP Compression in Quotes Service

```

POST http://api.rkd.reuters.com/api/Quotes/Quotes.svc HTTP/1.1
Content-Type: application/soap+xml
Accept-Encoding: gzip,deflate
Host: api.rkd.reuters.com
Content-Length: 1224

```

3.7 Date/Time Format

Thomson Reuters Knowledge Direct API services return date/time in UTC format:

- **News:** 2007-08-24T12:42:12-04:00
- **TimeSeries:** 2007-08-24T12:42:12-05:00
- **Token Management Service:** 2007-09-06T11:40:00.1782887Z
- **Significant Developments:** 2006-08-24T04:17:25.3730000-04:00
- **Quotes Service:** 2007-03-01T05:00:00
- **Other services:** 2007-03-01T05:00:00



chapter 4 Authentication and Authorization

Thomson Reuters Knowledge Direct API (TRKD API) uses an encrypted, expiring token to authenticate each request. To create this token, your application submits credentials to the Token Management service. The Token Management service authenticates the credentials and returns the token.

Note that, unlike all other TRKD API transactions, you must make authentication and authorization requests (that is, requests to the TokenManagement_1 service) using HTTPS.

4.1 Understanding Application Identification Strings (appids)

An application identification string (appid) is a short descriptive string that uniquely identifies your application for tracking and entitlement purposes. Thomson Reuters assigns an appid to you during setup. Your application submits this appid with each API request.

For a ServiceToken request (CreateServiceToken_Request_1), you must include the appid in the SOAP body:

XML Sample Request - Creating a Service Token

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
...
<Body>
  <CreateServiceToken_Request_1 xmlns:global="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1" xmlns="http://www.
reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1">
    <ApplicationID xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">[AppID]</
ApplicationID>
    <Username>[service user]</Username>
    <Password>[password]</Password>
  </CreateServiceToken_Request_1>
</Body>
</Envelope>
```

For all other requests, you must include the appid in the SOAP header:

XML Sample

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/rkd/SignificantDevelopments/SignificantDevelopments.svc</
To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/rkd/ns/2006/05/01/webservices/rkd/
SignificantDevelopments_1/GetSignificantDevelopments_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  ...
</Envelope>
```



4.2 Understanding Service Users, Impersonation (Effective Users)

You can use a single credential (service user) for all users of your application or support individual user credentials (impersonation through effective users). The user credential provides the appropriate entitlements (rights) to data from various services. For example, a credential may be limited to estimates from particular regions.

A single service user is all you need for applications where all users have the same entitlements. However, the most common scenario is an application that supports individual user credentials (impersonation through effective users) to personalize each users experience.

TRKD supports two types of effective users, depending on the particular service you are using:

- **Reuters** - This type of effective user represents an identity created (through manual administration during setup of your application) and maintained in the Thomson Reuters user data store. Reuters type is the default effective user type.
- **Unmanaged** - This type of effective user represents an identity with no entry in the Thomson Reuters user data store. Your application is responsible for maintaining this user identity.

Please refer to the documentation about the particular service you are using for information about the effective user type that service supports.

4.3 Understanding Authentication Tokens

An authentication token is an encrypted, expiring string that securely identifies the service user (or effective user). Your application must pass an authentication token in each web service request.

To create a token representing the service user (**service token**), use `CreateServiceToken_Request`. To create a token representing a particular effective user credential (**impersonation token**), your application makes a second request passing the particular effective user credential (`CreateImpersonationToken_Request`). The application then passes this impersonation token with each data request.

Token Expiration

Service tokens and impersonation tokens expire after a configurable time period. The default expiration is **90** minutes. You should code your application to reuse the token until the token expires.

Note: You should not request a new token every time you make a request. It takes less time to get actual data than to get a new token.

When TRKD API receives an expired token, the API returns a SOAP fault:

XML Sample Response - Expired Token

```
<Description Main="Token expired." />
<TornadoError>
  <s:Fault xmlns:s="http://www.w3.org/2003/05/soap-envelope">
    <s:Code>
      <s:Value>s:Receiver</s:Value>
      <s:Subcode>
        <s:Value xmlns:a="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Faults_1">a:General_UnhandledException</s:Value>
      </s:Subcode>
    </s:Code>
    <s:Reason>
      <s:Text xml:lang="en-US">Token expired.</s:Text>
    </s:Reason>
    <s:Detail>
      <ClientErrorReference xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Faults_1" xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
        <Timestamp>2007-03-01T18:55:24.6070243Z</Timestamp>
        <ErrorReference>17e277ed6a0e4ba79ca97eb12403c5e0</ErrorReference>
        <ServerReference>3F81D8F1444DB4083A79F37543B4B26BAF3240FB7E575C85</ServerReference>
      </ClientErrorReference>
    </s:Detail>
  </s:Fault>
</TornadoError>
```



Use this fault as a signal to create and cache a new token. For coding suggestions, see chapter Coding Examples.

Note: Responses from the Token Management include the token expiration time. See section Creating a Token.

4.3.1 Creating a Token

Use the Token Management service to create tokens.

Note that, unlike all other TRKD API transactions, you must make authentication and authorization requests (that is, requests to the TokenManagement_1 service) using HTTPS.

Service Endpoint

Token Management Endpoint

<https://api.rkd.reuters.com/api/TokenManagement/TokenManagement.svc/Anonymous>

Required Header

Each post to the Token Management service must include the following HTTP headers:

Required HTTP Headers

```
POST api/TokenManagement/TokenManagement.svc/Anonymous HTTP/1.1
Content-Type: application/soap+xml
Host: api.rkd.reuters.com
Content-Length: [length]
```

You can use a single credential (service user) to create a service token that represents all users of your application or support individual user credentials (effective users) by creating an impersonation token representing each user.

Creating a Service Token

To create a token representing the service user (service user token), post a CreateServiceToken request to the Token Management service.

XML Sample Request - Creating a Service Token

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/TokenManagement/TokenManagement.svc/Anonymous</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1/CreateServiceToken_1</Action>
  </Header>
  <Body>
    <CreateServiceToken_Request_1 xmlns:global="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1">
      <ApplicationID xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">[AppID]</ApplicationID>
      <Username>[service user]</Username>
      <Password>[password]</Password>
    </CreateServiceToken_Request_1>
  </Body>
</Envelope>
```

XML Sample Response - Creating a Service Token

```
<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" s:mustUnderstand="1" >http://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1/CreateServiceToken_1_Reply</a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <CreateServiceToken_Response_1 xmlns="https://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1">
```



```

    <Expiration>[token expiration YYYY-MM-DDTHH:MM:SS]</Expiration>
    <Token xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">[service token]</Token>
  </CreateServiceToken_Response_1>
</Body>
</Envelope>

```

Parse the response to retrieve the service token. If your application uses a single credential to represent all users, submit this service token with each data request. If your application supports individual user credentials, use this service token to create an impersonation token.

Creating an Impersonation Token

To create a token representing an individual user, post a Create Impersonation Token request to the Token Management service. You can create either a Reuters effective user or an Unmanaged effective user token.

XML Sample Request - Creating an Impersonation Token (Reuters effective user)

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/TokenManagement/TokenManagement.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1/CreateImpersonationToken_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <CreateImpersonationToken_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1">
      <EffectiveUsername>[effective user]</EffectiveUsername>
    </CreateImpersonationToken_Request_1>
  </Body>
</Envelope>

```

XML Sample Response - Creating an Impersonation Token (Reuters effective user)

```

<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" s:mustUnderstand="1" >http://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1/CreateServiceToken_1_Reply</a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <CreateImpersonationToken_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1">
      <Expiration>[token expiration YYYY-MM-DDTHH:MM:SS]</Expiration>
      <Token xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">[Impersonation Token]</Token>
    </CreateImpersonationToken_Response_1>
  </Body>
</Envelope>

```

XML Sample Request - Creating an Impersonation Token (Unmanaged effective user)

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/TokenManagement/TokenManagement.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1/CreateImpersonationToken_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <CreateImpersonationToken_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1">
      <EffectiveUsername>[effective user]</EffectiveUsername>
    </CreateImpersonationToken_Request_1>
  </Body>
</Envelope>

```



```
<Body>
  <CreateImpersonationToken_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1">
    <EffectiveUsername userType="Unmanaged">[unmanaged user]</EffectiveUsername>
  </CreateImpersonationToken_Request_1>
</Body>
</Envelope>
```

XML Sample Response - Creating an Impersonation Token (Unmanaged effective user)

```
<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" s:mustUnderstand="1" >http://www.reuters.com/ns/2006/05/01/webservices/
      rkd/TokenManagement_1/CreateServiceToken_1_Reply</a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <CreateImpersonationToken_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1">
      <Expiration>[token expiration YYYY-MM-DDTHH:MM:SS]</Expiration>
      <Token xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">[Impersonation Token]</Token>
    </CreateImpersonationToken_Response_1>
  </s:Body>
</Envelope>
```

Note that the Create Impersonation Token request includes the service token in the SOAP header.

Parse the response to retrieve the impersonation token. Submit this impersonation token with each data request.

4.3.2 Creating Service and Impersonation Token in One Request

You can create both Service and Impersonation Token (Reuters or Unmanaged) in one request by using a CreateImpersonationToken_Request_2 operation and passing the service user credentials and the effective user id at once.

XML Sample Request - Creating Service and Impersonation Tokens (Reuters effective user)

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/TokenManagement/TokenManagement.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1/
      CreateImpersonationToken_2</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <CreateImpersonationToken_Request_2 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1">
      <ApplicationID xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">[AppID]</ApplicationID>
      <Username>[service user]</Username>
      <Password>[password]</Password>
      <EffectiveUsername>[effective user]</EffectiveUsername>
    </CreateImpersonationToken_Request_2>
  </Body>
</Envelope>
```

XML Sample Response - Creating Service and Impersonation Tokens (Reuters effective user)

```
<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" s:mustUnderstand="1" >http://www.reuters.com/ns/2006/05/01/webservices/
      rkd/TokenManagement_1/CreateImpersonationToken_2_Reply</a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <CreateImpersonationToken_Response_2 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1">
      <Expiration>[token expiration YYYY-MM-DDTHH:MM:SS]</Expiration>
      <Token xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">[Impersonation Token]</Token>
    </CreateImpersonationToken_Response_2>
  </s:Body>
</Envelope>
```



```

</s:Header>
<s:Body>
  <CreateImpersonationToken_Response_2 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1">
    <Expiration>[token expiration YYYY-MM-DDTHH:MM:SS]</Expiration>
    <global:Token xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">[Impersonation Token]</global:Token>
  </CreateImpersonationToken_Response_2>
</Body>
</Envelope>

```

4.3.3 Creating New Token Using Expired Token

If your token has expired you can create a new valid token using the CreateImpersonationToken_Request_3 request. Keep in mind that Service User and ApplicationID for the new token will be extracted from the request header and not from the token in the request body.

CreateImpersonationToken_Request_3 request requires an ApplicationID and a Token. This token is decoded to retrieve effective user, and a new token is generated for this effective user. See section Understanding Authentication Tokens for more details about token and effective user.

Note that, unlike all other TRKD API transactions, you must make authentication and authorization requests (that is, requests to the TokenManagement_1 service) using HTTPS.

XML Sample Request - Creating a New Token for the Same Effective User

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/TokenManagement/TokenManagement.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1/CreateImpersonationToken_3</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <CreateImpersonationToken_Request_3 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1" xmlns:global="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <global:ApplicationID>[AppID]</global:ApplicationID>
      <global:Token>[service token]</global:Token>
    </CreateImpersonationToken_Request_3>
  </Body>
</Envelope>

```

XML Sample Response - Creating a New Token for the Same Effective User

```

<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" s:mustUnderstand="1" >http://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1/CreateImpersonationToken_3_Reply</a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <CreateImpersonationToken_Response_3 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1" xmlns:global="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <Expiration>[token expiration YYYY-MM-DDTHH:MM:SS]</Expiration>
      <global:Token>[impersonation token]</global:Token>
    </CreateImpersonationToken_Response_3>
  </Body>
</Envelope>

```



4.4 WSDL

WSDL for CreateServiceToken_1 and CreateImpersonationToken_2 operations (they require passwords to be transferred):

Token Management WSDL

http://api.rkd.reuters.com/schemas/TokenManagement/wSDL/TokenManagement_1_HttpsAndAnonymous.wsdl

For other operations, Token Management WSDL will be the following:

Token Management WSDL

http://api.rkd.reuters.com/schemas/TokenManagement/wSDL/TokenManagement_1_HttpAndRKDToken.wsdl

4.5 Validating Token

This operation allows you to check whether your token has expired or not. ValidateToken_Request_1 request contains current ApplicationID and requires token as input data.

Note that, unlike all other TRKD API transactions, you must make authentication and authorization requests (that is, requests to the TokenManagement_1 service) using HTTPS.

XML Sample Request - Validating a Token

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/TokenManagement/TokenManagement.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1/ValidateToken_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <ValidateToken_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1" xmlns:global="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <global:ApplicationID>[AppID]</global:ApplicationID>
      <global:Token>[service token]</global:Token>
    </ValidateToken_Request_1>
  </Body>
</Envelope>
```

XML Sample Response - Validating a Token

```
<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" s:mustUnderstand="1" >http://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1/ValidateToken_1_Reply</a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <ValidateToken_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1">
      <Expiration>[token expiration YYYY-MM-DDTHH:MM:SS]</Expiration>
      <Valid>true</Valid>
    </ValidateToken_Response_1>
  </Body>
</Envelope>
```



4.6 Resetting Password

Using this operation you change/reset password for the current service user.

Note that, unlike all other TRKD API transactions, you must make authentication and authorization requests (that is, requests to the TokenManagement_1 service) using HTTPS.

XML Sample Request - Resetting Password

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/TokenManagement/TokenManagement.svc/Anonymous</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1/SetPassword_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <SetPassword_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1">
      <global:ApplicationID>[AppID]</global:ApplicationID>
      <Username>[your_username]</Username>
      <OldPassword>[old_password]</OldPassword>
      <NewPassword>[new_password]</NewPassword>
    </SetPassword_Request_1>
  </Body>
</Envelope>
```

XML Sample Response - Resetting Password

```
<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1/SetPassword_1_Reply</a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <SetPassword_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1"/>
  </s:Body>
</Envelope>
```



chapter 5 Using MessageID

To help debug any problems that occur, your application should include a unique message identifier in the SOAP header of each request to TRKD API. For example:

XML Sample Request - Using MessageID

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/SignificantDevelopments/SignificantDevelopments.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    ...
  </Header>
  ...
</Envelope>
```

TRKD logs each message ID. The TRKD API also returns the message ID in the SOAP header of the response. For example:

XML Sample Response - MessageID in the SOAP Header

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/rkd/SignificantDevelopments_1/GetSignificantDevelopments_1Response</a:Action>
    <a:RelatesTo>[Unique Message ID]</a:RelatesTo>
    ...
  </s:Header>
  ...
</s:Envelope>
```

Your application should log the message ID. When you contact Thomson Reuters for support, include the message ID in your problem description.

For coding suggestions, see chapter [Coding Examples](#).



chapter 6 Analytics

The Thomson Reuters Analytics service allows the users to retrieve analytics values and related currencies and dates. Analytics are available for equity instruments on company-level (e.g. Debt to Assets), issue-level (e.g. Dividend Cover) and market-level (e.g. 1 Year Price % Change), and for indices (at issue-level; e.g. Index Volume).

The following operations are available in the Analytics service:

1. **Get Analytics (GetAnalytics_1)** - provides the analytic values and associated information for a given entity.
2. **Get Analytic IDs (GetAnalyticIDs_1)** - provides the list of permissible analytics, in the form of Analytics IDs.

6.1 Authentication/Authorization, Service Endpoint, and Required Headers

Authorization

All requests to the Thomson Reuters Analytics service require an authorization token. For details, see section Understanding Authentication Tokens.

Authentication

Thomson Reuters Analytics service uses Reuters impersonation tokens for each effective user. In this case, Thomson Reuters must create each user before your application authenticates them. Unmanaged effective users are not supported in Thomson Reuters Analytics service.

For additional information, see section Creating a Token.

Service Endpoint

Thomson Reuters Analytics Endpoint

<http://api.rkd.reuters.com/api/2010/03/17/Analytics.svc>

Required Header

Required HTTP Headers

POST /2010/03/17/Analytics.svc HTTP/1.1
Content-Type: application/soap+xml
Host: api.rkd.reuters.com
Content-Length: [length]

6.2 WSDL

Analytics WSDL

http://api.rkd.reuters.com/schemas/Analytics/wsd/Analytics_1_HttpAndRKDToken.wsdl

6.3 Getting Analytics (GetAnalytics_1)

The users can use the GetAnalytics_1 request to retrieve analytic values and associated information for a given entity.

The example below requests analytic values for 'IBM.N' (RIC as identifier) and 'ALPHA' analytic ID.

XML Sample Request - Getting Analytics



```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Analytics/Analytics.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2010/03/17/webservices/rkd/Analytics_1/GetAnalytics_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetAnalytics_Request_1 xmlns=http://www.reuters.com/ns/2010/03/17/webservices/rkd/Analytics_1 xmlns:pf="http://www.reuters.com/ns/2010/03/17/webservices/rkd/Analytics_1_PublicForm">
      <IdentifyingBlock>
        <pf:Identifier identifierType="RIC">IBM.N</pf:Identifier>
      </IdentifyingBlock>
      <ConfigurationBlock>
        <AnalyticID>ALPHA</AnalyticID>
      </ConfigurationBlock>
    </GetAnalytics_Request_1>
  </Body>
</Envelope>

```

Attribute	Description
Identifier	RIC (Reuters Instrument Code).
AnalyticID	Defines specific analytic type. It's possible to specify multiple Analytic IDs.
PickListCSV	If you want to restrict the data items returned by the response, enter a comma-separated list of the items you want to be retrieved.

The response returns the following information:

XML Sample Response - Getting Analytics

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2009/10/01/webservices/rkd/Analytics_1/GetAnalytics_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <GetAnalytics_Response_1 timeStamp="2010-04-09T10:57:06.609375+00:00" xmlns="http://www.reuters.com/ns/2010/03/17/webservices/rkd/Analytics_1">
      <ResponseItem>
        <Content>
          <RIC>IBM.N</RIC>
          <SnapshotDate>2010-03-17</SnapshotDate>
          <Analytic>
            <AnalyticID>ALPHA</AnalyticID>
            <Value>0.006529686063557</Value>
          </Analytic>
        </Content>
      </ResponseItem>
    </GetAnalytics_Response_1>
  </Body>
</Envelope>

```

Note: If the user specifies an incorrect "PickListCSV" parameter in the request, the application returns a "blank" response:

XML Sample Response - Blank Response

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2009/10/01/webservices/rkd/Analytics_1/GetAnalytics_1_Reply</Action>
  </Header>

```



```

    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <GetAnalytics_Response_1 timeStamp="2010-05-14T11:08:01.796875+00:00" xmlns="http://www.reuters.com/ns/2010/03/17/
    webservices/rkd/Analytics_1">
      </GetAnalytics_Response_1>
    </Body>
  </Envelope>

```

6.4 Getting Analytic IDs (GetAnalyticIDs_1)

Use the GetAnalyticIDs_1 request to get the list of the permissible analytics, in the form of Analytic IDs.

XML Sample Request - Getting Analytic IDs

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Analytics/Analytics.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2010/03/17/webservices/rkd/Analytics_1/
    GetAnalyticIDs_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetAnalyticIDs_Request_1 xmlns="http://www.reuters.com/ns/2010/03/17/webservices/rkd/Analytics_1">
      </GetAnalyticIDs_Request_1>
    </Body>
  </Envelope>

```

The users do not need to specify any request parameters and the response will return all available analytic IDs.

The response returns the following information:

XML Sample Response - Getting Analytics IDs

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2009/10/01/webservices/
    rkd/Analytics_1/GetAnalytics_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <GetAnalyticIDs_Response_1 timeStamp="2010-04-09T10:55:47.203125+00:00" xmlns="http://www.reuters.com/ns/2010/03/17/
    webservices/rkd/Analytics_1">
      <ResponseItem>
        <AnalyticID>ADXR_14D</AnalyticID>
        ...
        <AnalyticID>BETA</AnalyticID>
        <AnalyticID>BVPS</AnalyticID>
        <AnalyticID>CAPITAL_RATIO_TIER1</AnalyticID>
        ...
        <AnalyticID>TOTAL_ASSETS</AnalyticID>
        ...
        <AnalyticID>VOLATILITY_90D</AnalyticID>
      </ResponseItem>
    </GetAnalyticIDs_Response_1>
  </Body>
</Envelope>

```



chapter 7 Authors Reference

The Authors Reference service is used to search for individual or multiple analysts, based on various user-defined attributes and criteria.

The following operations are available through the Authors Reference service:

- **Authors List** (AuthorsList_1): Retrieves a list of analysts from the Analyst database.
- **PersonsList** (PersonsList_1): Retrieves a list of people from the Analyst database.
- **Get Related Accounts** (GetRelatedAccounts_1): Retrieves accounts related to an analyst.
- **Get Teams** (GetTeams_1): Retrieves the following information about teams of analysts.

7.1 Authentication/Authorization, Service Endpoint, and Required Headers

Authorization

All requests to the Authors Reference web service require an authorization token. For details, see section Understanding Authentication Tokens.

Authentication

Authors Reference uses Reuters impersonation tokens for each effective user. In this case, Thomson Reuters must create each user before your application authenticates them. Unmanaged effective users are not supported in Authors Reference.

For additional information on creating a Service Token, see section Creating a Token.

Service Endpoint

Authors Reference Endpoint

<http://api.rkd.reuters.com/api/Authorsref/Authorsref.svc>

Required Header

Required HTTP Headers

POST api/Authorsref/Authorsref.svc HTTP/1.1
 Content-Type: application/soap+xml
 Host: api.rkd.reuters.com
 Content-Length: [length]

7.2 WSDL

WSDL:

http://api.rkd.reuters.com/schemas/Authorsref/wSDL/Authorsref_1_HttpAndRKDToken.wsdl

7.3 Authors List (AuthorsList_1)

The AuthorsList_1 request retrieves a list of analysts from the Analyst database, according to the parameters provided.

You can use the following criteria options can narrow down your search:

- **Required Info:** This criteria indicates what information should exist in the returned author record. The options are:
 - o Basic
 - o ctb

- o Education
- o Categorization
- o Contrib Strings
- o Event
- o Team Info
- **Basic Search:** You can use this search criteria to filter on basic information concerning the author. You can specify the following information:
 - o nameSuffix
 - o middleName
 - o firstName
 - o lastName
 - o personID
 - o uid
 - o authorCode
 - o Specialty
- **ctb Search:** This criteria lets you search for a specific contributor ID.
- **Contributor String Search:** This criteria allows you to search a contributors information for specified text.

The following example shows how to retrieve the first ten authors with information written in English.

XML Sample Request - Get Authors List

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Authorsref/Authorsref.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/Authorsref_1/AuthorsList_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <AuthorsList_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Authorsref_1" rowcount="10" dstLangID="en" useMasterDB="true" returnStarmineID="false">
      <authorSearchCriterion />
    </AuthorsList_Request_1>
  </Body>
</Envelope>
```

Attribute	Description
rowcount	Defines number of records to be retrieved.
startrow	Defines the starting row which records are to be retrieved.
dstLangID	Defines default language.
useMasterDB	Defines whether to retrieve records from the Master DB.
returnStarmineID	Defines whether to retrieve Starmine ID's for authors. This allows clients who are migrating from Starmine products to map the authors from their Starmine product to the ones on TRKD API.

XML Sample Response - Get Authors List (Basic Search)

The response returns the Author Code and User Id of the requested analysts.

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/01/12/webservices/rkd/Authorsref_1/AuthorsList_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <AuthorsList_Response_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Authorsref_1">
      <AuthorsListResponse>
        <author authorCode="3ZLM" uid="30167697" />
      </AuthorsListResponse>
    </AuthorsList_Response_1>
  </Body>
</Envelope>
```



```

    <author authorCode="3IS4" uid="30145973" />
    <author authorCode="35T6" uid="30129218" />
    <author authorCode="35TU" uid="30129242" />
    <author authorCode="3CDH" uid="30137681" />
    <author authorCode="3CDI" uid="30137682" />
    <author authorCode="3CDJ" uid="30137683" />
    <author authorCode="3CK8" uid="30137922" />
    <author authorCode="3ECX" uid="30140247" />
    <author authorCode="3ECZ" uid="30140249" />
  </AuthorsListResponse>
</AuthorsList_Response_1>

</Body>
</Envelope>

```

7.4 Persons List (PersonsList_1)

The PersonsList_1 request retrieves a list of people from the Analyst database.

You can use the following criteria options can narrow down your search:

- **Required Info:** This criteria indicated what information should exist in the returned author record. The options are:
 - o Basic
 - o ctb
 - o Education
 - o Categorization
 - o Contrib Strings
 - o Event
 - o Team Info
- **Basic Search:** You can use this search criteria to filter on basic information concerning the author. You can specify the following information:
 - o nameSuffix
 - o middleName
 - o firstName
 - o lastName
 - o personID
 - o uid
 - o authorCode
 - o Specialty
- **ctb Search:** This criteria lets you search for a specific contributor ID.
- **Contributor String Search:** This criteria allows you to search contributors information for specified text.

The following example shows how to retrieve person list.

XML Sample Request - Get Persons List

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Authorsref/Authorsref.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/Authorsref_1/PersonsList_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <PersonsList_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Authorsref_1" rowcount="5" dstLangID="en" useMasterDB="true">
      <authorSearchCriterion />
    </PersonsList_Request_1>
  </Body>
</Envelope>

```



Attribute	Description
rowcount	Defines number of records to be retrieved.
startrow	Defines the starting row which records are to be retrieved.
dstLangID	Defines default language.
useMasterDB	Defines whether to retrieve records from the Master DB.

XML Sample Response - Get Persons List

The response returns the Person Id of the requested people.

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/01/12/webservices/rkd/Authorsref_1/PersonsList_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <PersonsList_Response_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Authorsref_1">
      <AuthorsListResponse>
        <person personID="3RHY" />
        <person personID="3RRA" />
        <person personID="3ZLM" />
        <person personID="3IS4" />
        <person personID="3CDH" />
      </AuthorsListResponse>
    </PersonsList_Response_1>
  </Body>
</Envelope>
```

Note: In the Analyst Database, an analyst is associated with a company, whereas a person is not identified with any specific company. This makes it possible to keep track of people even when they leave one company and join another.

7.5 Get Related Accounts (GetRelatedAccounts_1)

The GetRelatedAccounts_1 request retrieves accounts related to an analyst from the Analyst database.

The following example shows how to retrieve related accounts.

XML Sample Request - Get Related Accounts

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Authorsref/Authorsref.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/Authorsref_1/GetRelatedAccounts_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetRelatedAccounts_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Authorsref_1">
      <company ctbID="25202" />
    </GetRelatedAccounts_Request_1>
  </Body>
</Envelope>
```

This request takes the Contribution ID as input and returns related accounts. See the example below of a sample response.

XML Sample Response - Get Related Accounts

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/01/12/webservices/
rkd/Authorsref_1/GetRelatedAccounts_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <GetRelatedAccounts_Response_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Authorsref_1">
      <relatedAccounts>
        <company companyName="ABN Amro Asset Management" ctbID="25202" isParent="true" />
      </relatedAccounts>
    </GetRelatedAccounts_Response_1>
  </Body>
</Envelope>

```

7.6 Get Teams (GetTeams_1)

The GetTeams_1 request retrieves the following information about teams of analysts from the Analyst database:

- Team ID
- Team Name
- Contributor ID
- Team description
- Team start date
- Team end date

It is possible to search for a team using the following criteria:

- Team ID
- Contributor ID
- Team Name

This request takes the Team ID as input and returns information for the team.

XML Sample Request - Get Teams

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Authorsref/Authorsref.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/Authorsref_1/
GetTeams_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetTeams_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Authorsref_1" teamID="131" />
  </Body>
</Envelope>

```

XML Sample Response - Get Teams

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/01/12/webservices/
rkd/Authorsref_1/GetTeams_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>

```




```

<GetTeams_Response_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Authorsref_1">
  <GetTeamsResponse>
    <team ctbID="234" description="A new team, made to order." endDate="2007-11-30" startDate="2007-11-01" teamID
      ="131" teamName="Team XYZ" />
    </GetTeamsResponse>
  </GetRelatedAccounts_Response_1>
</Body>
</Envelope>

```

Attribute	Description
ctbID	Defines the Contributor Id of the company to which the analyst belongs.
Description	Shows the description of the team.
endDate	Shows the effective end date for the team.
startDate	Shows the effective start date for the team.
teamID	Shows the Team ID.
teamName	Shows the name of the team.

7.7 Listing All Authors (Analysts) from Contributor (Company)

To efficiently support administration of the many analysts in the Thomson Reuters database, the Authors Reference service uses a parent-child relationship. Therefore, to list all analysts from a contributor, first you have to use the GetRelatedAccounts_1 request to find the parent. For example:

XML Sample Request - Retrieving the Parent

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Authorsref/Authorsref.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/Authorsref_1/
      GetRelatedAccounts_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetRelatedAccounts_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Authorsref_1">
      <company ctbID="18185" />
    </GetRelatedAccounts_Request_1>
  </Body>
</Envelope>

```

XML Sample Response - Retrieving the Parent

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/01/12/webservices/
      rkd/Authorsref_1/GetRelatedAccounts_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <GetRelatedAccounts_Response_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Authorsref_1">
      <relatedAccounts>
        <company ctbID="2" companyName="Merrill Lynch" isParent="true" />
        <company ctbID="5" companyName="Merrill Lynch - Test for ML_002 feed" isParent="false" />
        <company ctbID="44" companyName="Merrill Lynch TEST" isParent="false" />
        <company ctbID="15431" companyName="Merrill Lynch - Clara" isParent="false" />
        <company ctbID="18185" companyName="Merrill Lynch International Private Client Group" isParent="false" />
        <company ctbID="29477" companyName="Merrill Lynch CFCR Contributions" isParent="false" />
        <company ctbID="40845" companyName="Merrill Lynch RIXML Test Company" isParent="false" />
      </relatedAccounts>
    </GetRelatedAccounts_Response_1>
  </Body>
</Envelope>

```



```

    </relatedAccounts>
  </GetRelatedAccounts_Response_1>
</Body>
</Envelope>

```

Then use the **parent** contributor ID to retrieve the full list of analysts. For example:

XML Sample Request - Retrieving the Full List of Analysts

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Authorsref/Authorsref.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/Authorsref_1/AuthorsList_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <AuthorsList_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Authorsref_1">
      <authorSearchRequiredInfo authorInfoType="basic" />
      <authorSearchCriterion>
        <basicSearch />
        <ctbSearch visibleAsDisabled="false" isCurrent="true" ctbID="2" />
      </authorSearchCriterion>
    </AuthorsList_Request_1>
  </Body>
</Envelope>

```

7.7.1 Requesting Active Analysts

By default, the Authors Reference service returns disabled analysts for historical purposes. To request only analysts that are not disabled, set the `<visibleAsDisabled>` attribute to 'false'. For example:

XML Sample Request - Requesting Active Analysts

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Authorsref/Authorsref.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/Authorsref_1/AuthorsList_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <AuthorsList_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Authorsref_1">
      <authorSearchCriterion>
        <ctbSearch visibleAsDisabled="false" ctbID="2" />
      </authorSearchCriterion>
    </AuthorsList_Request_1>
  </Body>
</Envelope>

```



chapter 8 Charts

You can use the Thomson Reuters Charts service to retrieve a wide range of technical charts and tabular displays generated live by the Thomson Reuters Data Center analytics engine. This service provides many customizable features giving you the control of how the data will be displayed.

Charting is available on an Intraday and Interday basis:

- INTERDAY lets you retrieve historical time series prices on an instrument, summarized in daily, weekly or monthly periods.
- INTRADAY lets you retrieve a time series of Intraday market prices on an instrument, summarized in periods from 1 minute to 1 hour (configurable).

The supported time intervals (periods) for Intraday charts are: 1, 5, 15, 30, 60 minutes.

Chart's Availability for Low Volume Instruments

TRKD API Charts may not render images for certain instruments because they lack trading volume which would be needed to render data points for a chart. These are extremely rare cases and this issue only appears when instruments do not trade for weeks at a time, and the lack of data makes it hard to render charts. However, you will still be able to get price & volume information for these instruments.

8.1 Authentication/Authorization, Service Endpoint, and Required Headers

Authorization

All requests to Thomson Reuters Charts web service require an authorization token. For details, see section Understanding Authentication Tokens.

Authentication

Thomson Reuters Charts uses Reuters impersonation tokens for each effective user. In this case, Thomson Reuters must create each user before your application authenticates them. Unmanaged effective users are not supported in Thomson Reuters Charts.

For additional information on creating a Service Token, see section Creating a Token.

Service Endpoint

Reuters Charts Endpoint

`http://api.rkd.reuters.com/api/Charts/Charts.svc`

Required Header

Required HTTP Headers

POST /api/Charts/Charts.svc HTTP/1.1
Content-Type: application/soap+xml
Host: api.rkd.reuters.com
Content-Length: [length]



8.2 WSDL

WSDL:

http://api.rkd.reuters.com/schemas/Charts/wsd/Charts_1_HttpAndRKDTOKEN.wsdl

8.3 Understanding Reuters Charts Request

The charts request call is broken up into the following sections:

- **chartRequest:** Basic chart description to indicate width, height and image type.
- **TimeSeries:** Defines the financial data being used in the chart.
- **Analyses:** Section that specifies the analysis formula used in the Chart.
- **StandardTemplate:** Defines how the data is being shown in the chart.
- **Scheme:** A set of display properties (color, line styles etc) used within a chart to render different types of data.

Note: Thomson Reuters recommends to use the GetChart_Request_2 request. It is the same as the GetChart_Request_1 only without the CorporateEvents element.

Note: The current data point limitation is 1000.

XML Sample Request - Get Charts

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Charts/Charts.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Charts_1/GetChart_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetChart_Request_2 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Charts_1">
      <chartRequest ImageType="BMP" Width="500" Height="400" Culture="en-US">
        <TimeSeries>
          <TimeSeriesRequest xmlns="http://metastock.com/imageserver/financial">
            <Symbol>IBM.N</Symbol>
            <Reference>d1</Reference>
          </TimeSeriesRequest>
        </TimeSeries>
        <Analyses>
          <Analysis xmlns="http://metastock.com/imageserver/analysis">
            <Reference>a1</Reference>
            <OHLC>
              <Instrument1>
                <Reference>d1</Reference>
              </Instrument1>
            </OHLC>
          </Analysis>
          <Analysis xmlns="http://metastock.com/imageserver/analysis">
            <Reference>a2</Reference>
            <Vol>
              <Instrument1>
                <Reference>d1</Reference>
              </Instrument1>
            </Vol>
          </Analysis>
        </Analyses>
        <StandardTemplate xmlns="http://metastock.com/imageserver/financial">
          <Title>
            <Caption>
```



```

        <Visible>true</Visible>
        <Customized>false</Customized>
    </Caption>
    <Range>
        <Visible>true</Visible>
    </Range>
</Title>
<Legend>
    <Visible>true</Visible>
    <Information>Long</Information>
    <Layout>MultiLine</Layout>
    <Position>Overlaid</Position>
</Legend>
<Instrument>Symbol</Instrument>
<Delimiter>%</Delimiter>
<GridLines>None</GridLines>
<YAxisMarkers>None</YAxisMarkers>
<YAxisTitles>All</YAxisTitles>
<Brand>None</Brand>
<Interval>
    <CommonType xmlns="http://metastock.com/applications/data">Days</CommonType>
    <Multiplier xmlns="http://metastock.com/applications/data">1</Multiplier>
</Interval>
<ShowNonTradedPeriods>false</ShowNonTradedPeriods>
<ShowHolidays>false</ShowHolidays>
<ShowGaps>true</ShowGaps>
<XAxis>
    <Visible>true</Visible>
    <Position>Bottom</Position>
    <Range>
        <Fixed>
            <First>2007-04-17T00:00:00</First>
            <Last>2007-05-24T00:00:00</Last>
        </Fixed>
    </Range>
</XAxis>
<Subchart>
    <Weight>5</Weight>
    <YAxis>
        <Visible>true</Visible>
        <Position>Right</Position>
        <Invert>false</Invert>
        <Logarithmic>false</Logarithmic>
        <Display>
            <Mode>Automatic</Mode>
        </Display>
        <Range>
            <Automatic />
        </Range>
        <Analysis>
            <Reference>a1</Reference>
        </Analysis>
    </YAxis>
</Subchart>
...
</StandardTemplate>
<Scheme xmlns="http://metastock.com/imageserver/financial">
    <Background>
        ...
    </Background>
    <Border>
        ...
    </Border>
    <GridLines>
        ...
    </GridLines>
    <Title>
        ...
    </Title>
    <Legend>
        ...
    </Legend>
    <XAxis>
        ...
    </XAxis>

```



```

    <YAxis>
    ...
    </YAxis>
    <Series>
    ...
    </Series>
    ...
    <LevelLine>
    <Color>
    <RGB>120;120;120</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>1</Width>
    </LevelLine>
    </Scheme>
    </chartRequest>
  </GetChart_Request_2>
</Body>
</Envelope>

```

Note: To build a correct weekly chart, please specify a "RequestRange" within the xml <TimeSeriesRequest> tag. You can select a StartDate and an EndDate, as an example among the possible options:

XML Sample Request - Displaying a Weekly Chart Correctly

```

<TimeSeries>
  <TimeSeriesRequest xmlns="http://metastock.com/imageserver/financial">
    <Symbol>IBM.N</Symbol>
    <Reference>d1</Reference>
    <RequestRange>
      <StartDate xmlns="http://metastock.com/applications/data">1999-01-01T00:00:00</StartDate>
      <EndDate xmlns="http://metastock.com/applications/data">2010-01-01T00:00:00</EndDate>
    </RequestRange>
  </TimeSeriesRequest>
</TimeSeries>

```

8.3.1 chartRequest

The chartRequest section contains the basic chart description indicating the charts width, height, image type and Title.

XML Sample Request - Get Charts

```

<GetChart_Request_2 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Charts_1">
  <chartRequest ImageType="BMP" Width="500" Height="400" Title="Chart Title" Culture="en-US" DacsUser="">
    ...
  </chartRequest>
</GetChart_Request_2>

```

Attribute	Description
ImageType	Selects the type of image to return. The following image types are supported: • BMP • PNG • JPEG • GIF • EMF
Width	The width of the image in pixels.



Height	The height of the image in pixels.
Culture	Shows culture-specific information, such as language, sublanguage, calendar, etc.
Title	Title for the chart.

Note: The culture parameter allows the client to specify what locale and language they would like the chart to adopt. That encompasses such settings like the language used for text labels, the formatting of the date (mm-dd-yyyy instead of dd-mm-yyyy for 'en-US' culture), decimal separators (25.63 instead of 25,63 for 'en-US' culture), etc. The culture strings ("en-US", "pt-BR", etc) are standard across Microsoft products and platforms. The whole graph is affected by the culture parameter, the y-axis and x-axis values are displayed differently based on the culture, labels are different - "Date" for English vs. "Data" for Spanish, etc.

The clients don't need to specify anything other than "en-US" unless they want localized formatting and/or strings. Keep in mind that if you specify your 'culture' parameter, the chart may not display properly because chart data may not be translated for the specified culture.

8.3.2 TimeSeries

TimeSeries section is used to indicate the data used in the chart. You can create multiple data sets that can be used in later sections simply by entering their reference id that is set for each data set in this section.

XML Sample Request - Get Charts

```
<TimeSeries>
  <TimeSeriesRequest xmlns="http://metastock.com/imageserver/financial">
    <Symbol>IBM.N</Symbol>
    <Reference>d1</Reference>
  </TimeSeriesRequest>
  <TimeSeriesRequest xmlns="http://metastock.com/imageserver/financial">
    <Symbol>VOD.L</Symbol>
    <Reference>d2</Reference>
  </TimeSeriesRequest>
</TimeSeries>
```

Attribute	Description
DataProvider	This field indicates which data provider to request data from. Leaving this blank will default to the default data provider. Note: Currently only one data provider is supported (TSI). Since TSI is the default value you can leave this field out.
FeedID	This field indicates which feed of the data provider to request data from. Leaving this blank will default to the default feed.
Field	This is the field of data that we should retrieve for the symbol (RIC). Leaving this blank will use the default field of the symbol.
Symbol	The symbol (RIC) to request data for.
Reference	This is the name (or id) that the analyses will reference to indicate what data they are using. This needs to be a unique value.
Request Range	Defines the data periods/points requested. Note: If empty - 1000 points range is used for a chart by default.

8.3.3 Analyses

This section of the Charts Request gives the ability to analyze information provided in TimeSeries section and indicate how it should be graphed. You are able to analyze and graph multiple data sets.

For a full list of supported Analyses see section Analyses List.

XML Sample Request - Get Charts

```
<Analyses>
```



```

<Analysis xmlns="http://metastock.com/imageserver/analysis">
  <Reference>a1</Reference>
  <Line>
    <Instrument1>
      <Reference>d1</Reference>
    </Instrument1>
  </Line>
</Analysis>
<Analysis xmlns="http://metastock.com/imageserver/analysis">
  <Reference>a2</Reference>
  <Line>
    <Instrument1>
      <Reference>d2</Reference>
    </Instrument1>
  </Line>
</Analysis>
<Analysis xmlns="http://metastock.com/imageserver/analysis">
  <Reference>a1m</Reference>
  <MACD>
    <Instrument1>
      <Reference>d1</Reference>
    </Instrument1>
  </MACD>
</Analysis>
<Analysis xmlns="http://metastock.com/imageserver/analysis">
  <Reference>a2m</Reference>
  <MACD>
    <Instrument1>
      <Reference>d2</Reference>
    </Instrument1>
  </MACD>
</Analysis>
</Analyses>

```

Attribute	Description
Analysis	Contains analysis information.
Reference	This is the name (or ID) that the Template will reference to indicate where this analysis should be drawn on the chart. This must be a unique value.
Analysis Type Section <[Analysis Code]>	This section indicates the type of the analysis you are running. For a full list of Analyses see section Analyses List. This element contains the following information: • Instrument1: Defines what data is used in the current instance of the analysis through the following children elements. • Action: Selects which column of data to use for the analysis: Valid values are (empty), Open, High, Low, Close and Volume. Leaving it blank indicates to use the default column of data (Close). • Reference: This defines the data to use. This needs to match one of the data requests or custom data "Reference" properties as defined in TimeSeries section. • Series1: This is the number of series that the analysis will draw on the chart. Some analyses will produce more than one series to draw (Bollinger Bands produce three lines to be drawn). This allows you to change the type of drawing of the series. However, not all analysis will allow all drawing styles. (BarOHLC will only allow OHLC drawing, Candle will only allow Candle). Series consists of the following child elements: • Name: This is the name of the series to draw. Valid names are OHLC, HLC, HL, Candle, Line, Dot, FilledLine, Spline, FilledSpline, Stepped, FilledStepped, Forest, and LinkedForest. Note: Not all names are valid for all analyses. • Symbol: This is the symbol to draw at each data point. This will be ignored for OHLC, HLC, HL, and Candle. The Possible values are (empty), None, Square, Diamond, UpArrow, DownArrow, and Circle.

8.3.4 StandardTemplate

In the StandardTemplate section you will setup the structure and options of the chart. This is where the options, number of



sub-charts, y-axes and placement of analyses are determined. You can enter one or more sub-charts each based on their own analysis and settings.

XML Sample Request - Get Charts

```
<StandardTemplate xmlns="http://metastock.com/imageserver/financial">
  <Title>
    <Caption>
      <Visible>true</Visible>
      <Customized>>false</Customized>
    </Caption>
    <Range>
      <Visible>true</Visible>
    </Range>
  </Title>
  <Legend>
    <Visible>true</Visible>
    <Information>Long</Information>
    <Layout>MultiLine</Layout>
    <Position>Overlaid</Position>
  </Legend>
  <Instrument>Symbol</Instrument>
  <Delimiter>%</Delimiter>
  <GridLines>None</GridLines>
  <YAxisMarkers>None</YAxisMarkers>
  <YAxisTitles>All</YAxisTitles>
  <Brand>None</Brand>
  <Interval>
    <CommonType xmlns="http://metastock.com/applications/data">Days</CommonType>
    <Multiplier xmlns="http://metastock.com/applications/data">1</Multiplier>
  </Interval>
  <ShowNonTradedPeriods>>false</ShowNonTradedPeriods>
  <ShowHolidays>>false</ShowHolidays>
  <ShowGaps>true</ShowGaps>
  <XAxis>
    <Visible>true</Visible>
    <Position>Bottom</Position>
    <Range>
      <Fixed>
        <First>2007-04-17T00:00:00</First>
        <Last>2007-05-24T00:00:00</Last>
      </Fixed>
    </Range>
  </XAxis>
  <Subchart>
    <Weight>5</Weight>
    <YAxis>
      <Visible>true</Visible>
      <Position>Right</Position>
      <Invert>>false</Invert>
      <Logarithmic>>false</Logarithmic>
      <Display>
        <Mode>Automatic</Mode>
      </Display>
      <Range>
        <Automatic />
      </Range>
      <Analysis>
        <Reference>a1</Reference>
        <LevelLine>Decimal</LevelLine>
        <CorporateEventsReference>[value]</CorporateEventsReference>
        <CorporateEventsVisible>CapitalChange</CorporateEventsVisible>
      </Analysis>
    </YAxis>
  </Subchart>
  ...
</StandardTemplate>
```

Attribute	Description



Title	The chart has an area at the top of its window reserved for the display of a textual title. This area is divided into two parts: the title caption and the date range display. The title caption shows the current interval of the X-Axis and the analyses that are in the chart. The date range shows the first and last date of the data that is currently displayed in the chart, and the time zone of the X-Axis. The following child elements give you further control of the Title: • Caption: caption contains the following elements: • Visible - You can hide or show the caption by setting it to true or false. • Customize - Rather than show the default information you can put in your own text. • Range: Contains the following element to show or hide the Range part of the Title. • Visible - You can hide or show the Range part of the title by setting this element to true or false.
Legend	Legend contains information from all sub-charts and is shown transparently inside or outside the chart. Contains the following elements: • Visible: You can show or hide the legend by setting this to true or false. • Information: You can choose to display the legend in one of the following three ways: • Long: example view: CndI; YHOO.O; Last Trade 2005-03-18; 404.75; 405.87; 401; 403.5 SMA; YHOO; 14 • Short: example view: CndI; YHOO.O; 2005-03-18; 404.75; 405.87; 401; 403.5 • Minimum: example view: CndI; 403.5 • Layout: Style of display that can be set to one of the following three choices: • MultiLine: This stacks all legend entries on top of each other. This is the default setting. • SingleLine: All legend entries for all analyses are on a single row. Only one row can be used, even if it does not fit horizontally on the chart. It makes sense to use Short or Minimum format when using this option. • WrappedLine: Like single row, except wraps the text when it hits the right edge of the screen and start a new row. • Position: This indicates where the legend should appear. The three options are: • Above • Below • Overlaid
Instrument	Defines if the instrument is based on: • Symbol • FeedSymbol • Name
Delimiter	Defines the feed delimiter.
GridLines	Defines how to show the grid lines on the Chart. The choices are: • None • Vertical • Horizontal • Both
YAxisMarkers	Defines the Y-Axis marker style. The possible choices are: • None • Diamond • Label
YAxisTitles	Defines the Y-Axis title style. The possible choices are: • None • Type • Currency • Unit • DisplayUnit • All
Brand	Option to display a brand to show that it is a MetaStock or a Reuters chart. The brand is displayed in the lower-right hand corner of the chart, below the x-axis.
Interval	Specifies the data intervals. Contains the following elements: • CommonType: Specifies the type of the interval. The choices are:



	• Unknown • Undefined • Ticks • Seconds • Minutes • Hours • Days • Weeks • Months • Quarters • Years • Multiplier: The interval of the unit defined in Common type.
ShowNonTradedPeriods	You can hide or show Non Traded Periods by setting this element to true or false.
ShowHolidays	You can hide or show Holidays by setting this element to true or false.
ShowGaps	You can hide or show Gaps by setting this element to true or false.
XAxis	Defines X-Axis style. Contains the following elements: • Visible: You can show or hide the X-Axis by setting this to true or false. • Position: This indicates where the X-Axis must appear. The two possible options are: • Bottom • Top • Range: Defines the range of the data displayed in the chart. The possible options are: • Default: This parameter displays the amount of data that best fits in a chart. • All: This parameter displays all data. • Fixed: This parameter displays the data for the entered period of time. • Last: This parameter displays the data for the last specified period of time. • Points: This parameter displays the fixed number of data points. Notes: The Charts service is limited to return only 1000 data points. To request a longer data range, see section Creating Chart for the Past 10 Years. The X-Axis range parameter in a chart can't be a period lower than what is specified for the chart Interval. So, for weekly charts (interval specified as "Weeks"), the X-Axis range parameter must be "Week" or higher, for example "Month" or "Quarter" or "Year".
SubChart	Option to display a Subchart and define its style. Contains the following elements: • Weight: Indicates the relative size of a sub-chart in the Chart. • YAxis: Defines Y-Axis style. • Visible: You can show or hide Y-Axis by setting this element to true or false. • Position: This indicates where Y-Axis must appear. Two possible options are: • Left • Right • Invert: You can choose to invert Y-Axis by setting this element to true or false. • Logarithmic: You can choose to display Y-Axis in a logarithmic scale by setting this element to true or false. • Display: This defines how Y-Axis display units are displayed: The possible options are: • Automatic: Automatic adjustment of units. • Decimal: Decimal display units. • Fraction: Fractional display units. • Financial: Financial display units. • Range: This determines minimum and maximum values to be displayed on the Y-Axis. The possible options are: • Automatic: Y-Axis automatically chooses a minimum and maximum values. • Fixed: You can specify fixed values for minimum and maximal values. • Relative: You can define a range of data for the Y-Axis to display around the last data point shown in the chart. • Analysis • Reference: This is the name (or ID) of the data set you specified in Time Series. • LevelLine: This element allows to specify the placement of level lines defined by the integrator. • CorporateEventsReference: This is the ID of corporate events that the Template will



reference to indicate which events must be drawn on the chart.

- **CorporateEventsVisible:** This element allows to display corresponding corporate events.
 - None
 - Capital Change
 - Dividend
 - Earnings
 - All

Note: CorporateEvents are not supported in the Get_Charts_2 request.

8.3.5 Scheme

The Scheme section defines display properties (color, line styles etc) used within a chart to render different types of data. You are able to set the display properties for the following items:

- Background
- Border
- GridLines
- Title
- Legend
- XAxis
- YAxis
- TimeSeries information

XML Sample Request - Get Charts

```
<Scheme xmlns="http://metastock.com/imageserver/financial">
  <Background>
    <BackgroundMode>Solid</BackgroundMode>
    <StartColor>
      <Named>White</Named>
    </StartColor>
    <EndColor>
      <Named>White</Named>
    </EndColor>
    <HatchStyle>LargeGrid</HatchStyle>
    <GradientMode>ForwardDiagonal</GradientMode>
    <ImageMode>Centered</ImageMode>
  </Background>
  <Border>
    <Color>
      <RGB>139;139;155</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>1</Width>
  </Border>
  <GridLines>
    <Color>
      <RGB>139;139;155</RGB>
    </Color>
    <DashStyle>Dot</DashStyle>
    <Width>1</Width>
  </GridLines>
  <Title>
    <Caption>
      <Color>
        <Named>Black</Named>
      </Color>
      <Family>Arial</Family>
      <Style>Bold</Style>
      <Size>12</Size>
    </Caption>
    <Range>
      <Color>
        <Named>Black</Named>
      </Color>
      <Family>Arial</Family>
      <Style>Regular</Style>
    </Range>
  </Title>
</Scheme>
```



```

        <Size>8.25</Size>
    </Range>
</Title>
<Legend>
    <Color>
        <Named>Black</Named>
    </Color>
    <Family>Arial</Family>
    <Style>Regular</Style>
    <Size>8.25</Size>
</Legend>
<XAxis>
    <Major>
        <Color>
            <Named>Black</Named>
        </Color>
        <Family>Arial</Family>
        <Style>Bold</Style>
        <Size>9.75</Size>
    </Major>
    <Minor>
        <Color>
            <Named>Black</Named>
        </Color>
        <Family>Arial</Family>
        <Style>Regular</Style>
        <Size>8.25</Size>
    </Minor>
</XAxis>
<YAxis>
    <Major>
        <Color>
            <Named>Black</Named>
        </Color>
        <Family>Arial</Family>
        <Style>Bold</Style>
        <Size>9.75</Size>
    </Major>
    <Minor>
        <Color>
            <Named>Black</Named>
        </Color>
        <Family>Arial</Family>
        <Style>Regular</Style>
        <Size>8.25</Size>
    </Minor>
    <Title>
        <Color>
            <Named>Black</Named>
        </Color>
        <Family>Arial</Family>
        <Style>Regular</Style>
        <Size>8.25</Size>
    </Title>
</YAxis>
<Series>
    <Color>
        <Named>Black</Named>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
    <FillColor>
        <Named>Black</Named>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
</Series>
...

```

Attribute	Description
Background	Specifies the style of chart's background.
Border	Specifies the style of chart's borders.



GridLines	Specifies the display settings for the gridlines.
Title	Specifies the display settings of the text shown in the title caption.
Legend	Specifies the style of chart's legend.
XAxis	Specifies the display settings for chart's X-Axis.
YAxis	Specifies the display settings for chart's Y-Axis.
Series	Specifies the display settings for chart's time series.

8.3.6 Retrieving 1Y Interday Stock Chart

The following request demonstrates how to retrieve the 1Y Interday Stock Chart.

XML Sample Request - Retrieve 1Y Interday Stock Chart

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Charts/Charts.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Charts_1/GetChart_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetChart_Request_2 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Charts_1">
      <chartRequest ImageType="PNG" Width="500" Height="400" Culture="en-US">
        <TimeSeries>
          <TimeSeriesRequest xmlns="http://metastock.com/imageserver/financial">
            <Symbol>IBM.N</Symbol>
            <Reference>d1</Reference>
          </TimeSeriesRequest>
        </TimeSeries>
        <Analyses>
          <Analysis xmlns="http://metastock.com/imageserver/analysis">
            <Reference>a1</Reference>
            <Line>
              <Instrument1>
                <Reference>d1</Reference>
              </Instrument1>
            </Line>
          </Analysis>
          <Analysis xmlns="http://metastock.com/imageserver/analysis">
            <Reference>a2</Reference>
            <Vol>
              <Instrument1>
                <Reference>d1</Reference>
              </Instrument1>
            </Vol>
          </Analysis>
        </Analyses>
        <StandardTemplate xmlns="http://metastock.com/imageserver/financial">
          <Title>
            <Caption>
              <Visible>true</Visible>
              <Customized>false</Customized>
            </Caption>
            <Range>
              <Visible>true</Visible>
            </Range>
          </Title>
          <Legend>
            <Visible>true</Visible>
            <Information>Long</Information>
            <Layout>MultiLine</Layout>
            <Position>Overlaid</Position>
          </Legend>
        </StandardTemplate>
      </chartRequest>
    </GetChart_Request_2>
  </Body>
</Envelope>
```



```

<Instrument>Symbol</Instrument>
<Delimiter>%</Delimiter>
<GridLines>None</GridLines>
<YAxisMarkers>None</YAxisMarkers>
<YAxisTitles>Type</YAxisTitles>
<Brand>None</Brand>
<Interval>
  <CommonType xmlns="http://metastock.com/applications/data">Days</CommonType>
  <Multiplier xmlns="http://metastock.com/applications/data">1</Multiplier>
</Interval>
<ShowNonTradedPeriods>>false</ShowNonTradedPeriods>
<ShowHolidays>>false</ShowHolidays>
<ShowGaps>>true</ShowGaps>
<XAxis>
  <Visible>>true</Visible>
  <Position>Bottom</Position>
  <Range>
    <Fixed>
      <First>2006-08-01T00:00:00</First>
      <Last>2007-08-01T00:00:00</Last>
    </Fixed>
  </Range>
</XAxis>
<Subchart>
  <Weight>5</Weight>
  <YAxis>
    <Visible>>true</Visible>
    <Position>Right</Position>
    <Invert>>false</Invert>
    <Logarithmic>>false</Logarithmic>
    <Display>
      <Mode>Automatic</Mode>
    </Display>
    <Range>
      <Automatic />
    </Range>
    <Analysis>
      <Reference>a1</Reference>
    </Analysis>
  </YAxis>
</Subchart>
<Subchart>
  <Weight>2</Weight>
  <YAxis>
    <Visible>>true</Visible>
    <Position>Right</Position>
    <Invert>>false</Invert>
    <Logarithmic>>false</Logarithmic>
    <Display>
      <Mode>Automatic</Mode>
    </Display>
    <Range>
      <Automatic />
    </Range>
    <Analysis>
      <Reference>a2</Reference>
    </Analysis>
  </YAxis>
</Subchart>
</StandardTemplate>
<Scheme xmlns="http://metastock.com/imageserver/financial">
  <Background>
    <BackgroundMode>Gradient</BackgroundMode>
    <StartColor>
      <Named>White</Named>
    </StartColor>
    <EndColor>
      <RGB>51;0;153</RGB>
    </EndColor>
    <HatchStyle>LargeGrid</HatchStyle>
    <GradientMode>Vertical</GradientMode>
    <ImageMode>Centered</ImageMode>
  </Background>
  <Border>
    <Color>

```



```

        <RGB>139;139;155</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>1</Width>
</Border>
<GridLines>
    <Color>
        <RGB>139;139;155</RGB>
    </Color>
    <DashStyle>Dot</DashStyle>
    <Width>1</Width>
</GridLines>
<Title>
    <Caption>
        <Color>
            <Named>Black</Named>
        </Color>
        <Family>Arial</Family>
        <Style>Bold</Style>
        <Size>12</Size>
    </Caption>
    <Range>
        <Color>
            <Named>Black</Named>
        </Color>
        <Family>Arial</Family>
        <Style>Regular</Style>
        <Size>8.25</Size>
    </Range>
</Title>
<Legend>
    <Color>
        <Named>Black</Named>
    </Color>
    <Family>Arial</Family>
    <Style>Regular</Style>
    <Size>8.25</Size>
</Legend>
<XAxis>
    <Major>
        <Color>
            <Named>White</Named>
        </Color>
        <Family>Arial</Family>
        <Style>Bold</Style>
        <Size>9.75</Size>
    </Major>
    <Minor>
        <Color>
            <Named>White</Named>
        </Color>
        <Family>Arial</Family>
        <Style>Regular</Style>
        <Size>8.25</Size>
    </Minor>
</XAxis>
<YAxis>
    <Major>
        <Color>
            <Named>Black</Named>
        </Color>
        <Family>Arial</Family>
        <Style>Bold</Style>
        <Size>9.75</Size>
    </Major>
    <Minor>
        <Color>
            <Named>Black</Named>
        </Color>
        <Family>Arial</Family>
        <Style>Regular</Style>
        <Size>8.25</Size>
    </Minor>
</YAxis>
<Title>
    <Color>

```




```

        <Named>Black</Named>
        </Color>
        <Family>Arial</Family>
        <Style>Regular</Style>
        <Size>8.25</Size>
    </Title>
</YAxis>
<Series>
    <Color>
        <RGB>255;0;0</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>2</Width>
    <FillColor>
        <Named>Black</Named>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
</Series>
<Series>
    <Color>
        <Named>White</Named>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
    <FillColor>
        <Named>Red</Named>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
</Series>
<Series>
    <Color>
        <RGB>62;169;0</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
    <FillColor>
        <RGB>62;169;0</RGB>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
</Series>
<Series>
    <Color>
        <RGB>156;38;115</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
    <FillColor>
        <RGB>156;38;115</RGB>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
</Series>
<Series>
    <Color>
        <RGB>255;120;0</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
    <FillColor>
        <RGB>255;120;0</RGB>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
</Series>
<Series>
    <Color>
        <RGB>25;108;229</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
    <FillColor>
        <RGB>25;108;229</RGB>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
</Series>
<Series>
    <Color>

```



```

        <RGB>60;117;28</RGB>
      </Color>
      <DashStyle>Solid</DashStyle>
      <Width>0</Width>
      <FillColor>
        <RGB>60;117;28</RGB>
      </FillColor>
      <FillStyle>Percent20</FillStyle>
    </Series>
    <Series>
      <Color>
        <RGB>230;176;18</RGB>
      </Color>
      <DashStyle>Solid</DashStyle>
      <Width>0</Width>
      <FillColor>
        <RGB>230;176;18</RGB>
      </FillColor>
      <FillStyle>Percent20</FillStyle>
    </Series>
    <Series>
      <Color>
        <RGB>0;186;193</RGB>
      </Color>
      <DashStyle>Solid</DashStyle>
      <Width>0</Width>
      <FillColor>
        <RGB>0;186;193</RGB>
      </FillColor>
      <FillStyle>Percent20</FillStyle>
    </Series>
    <Series>
      <Color>
        <RGB>255;178;127</RGB>
      </Color>
      <DashStyle>Solid</DashStyle>
      <Width>0</Width>
      <FillColor>
        <RGB>255;178;127</RGB>
      </FillColor>
      <FillStyle>Percent20</FillStyle>
    </Series>
    <Series>
      <Color>
        <RGB>100;79;190</RGB>
      </Color>
      <DashStyle>Solid</DashStyle>
      <Width>0</Width>
      <FillColor>
        <RGB>100;79;190</RGB>
      </FillColor>
      <FillStyle>Percent20</FillStyle>
    </Series>
    <Series>
      <Color>
        <RGB>209;36;33</RGB>
      </Color>
      <DashStyle>Solid</DashStyle>
      <Width>0</Width>
      <FillColor>
        <RGB>209;36;33</RGB>
      </FillColor>
      <FillStyle>Percent20</FillStyle>
    </Series>
    <Series>
      <Color>
        <RGB>38;87;135</RGB>
      </Color>
      <DashStyle>Solid</DashStyle>
      <Width>0</Width>
      <FillColor>
        <RGB>38;87;135</RGB>
      </FillColor>
      <FillStyle>Percent20</FillStyle>
    </Series>
  </Series>

```



<pre> <Series> <Color> <RGB>94;176;176</RGB> </Color> <DashStyle>Solid</DashStyle> <Width>0</Width> <FillColor> <RGB>94;176;176</RGB> </FillColor> <FillStyle>Percent20</FillStyle> </Series> <LevelLine> <Color> <RGB>0;0;153</RGB> </Color> <DashStyle>Solid</DashStyle> <Width>1</Width> </LevelLine> <LevelLine> <Color> <RGB>120;120;120</RGB> </Color> <DashStyle>Solid</DashStyle> <Width>1</Width> </LevelLine> </Scheme> </chartRequest> </GetChart_Request_2> </pre>
<pre> </Body> </Envelope> </pre>
XML Sample Response - Retrieve 1Y Interday Stock Chart
<pre> <s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope"> <s:Header> <a:Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Charts_1/GetChart_1_Reply</a:Action> <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo> </s:Header> <s:Body> <GetChart_Response_2 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Charts_1"> <ChartImageResult Server="api.rkd.reuters.com" Tag="5294F1E4824573D245D091494AE60346" Url="http://api.rkd.reuters.com/api/charts/3139392E3234392E33332E3135/7-Sep-2007_01-33-29PM/5294F1E4824573D245D091494AE60346.ashx" /> </GetChart_Response_2> </s:Body> </Envelope> </pre>

Note: After the chart is generated it will be available for 5 minutes at the specified URL.

The following is an example of a successfully built chart:





8.3.7 Retrieving 1Y Interday Stock Chart with Index Comparison

The following request demonstrates how to retrieve the 1Y Interday Stock Chart with Index Comparison.

XML Sample Request - Retrieve 1Y Interday Stock Chart with Index Comparison

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Charts/Charts.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Charts_1/GetChart_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetChart_Request_2 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Charts_1">
      <chartRequest ImageType="PNG" Width="500" Height="400" Culture="en-US">
        <TimeSeries>
          <TimeSeriesRequest xmlns="http://metastock.com/imageserver/financial">
            <Symbol>IBM.N</Symbol>
            <Reference>d1</Reference>
          </TimeSeriesRequest>
          <TimeSeriesRequest xmlns="http://metastock.com/imageserver/financial">
            <Symbol>.DJI</Symbol>
            <Reference>d2</Reference>
          </TimeSeriesRequest>
        </TimeSeries>
        <Analyses>
          <Analysis xmlns="http://metastock.com/imageserver/analysis">
            <Reference>a1</Reference>
          </Analysis>
        </Analyses>
      </chartRequest>
    </GetChart_Request_2>
  </Body>
</Envelope>
```



```

        <Line>
            <Instrument1>
                <Reference>d1</Reference>
            </Instrument1>
        </Line>
    </Analysis>
    <Analysis xmlns="http://metastock.com/imageserver/analysis">
        <Reference>a2</Reference>
        <Vol>
            <Instrument1>
                <Reference>d1</Reference>
            </Instrument1>
        </Vol>
    </Analysis>
    <Analysis xmlns="http://metastock.com/imageserver/analysis">
        <Reference>a3</Reference>
        <Line>
            <Instrument1>
                <Reference>d2</Reference>
            </Instrument1>
        </Line>
    </Analysis>
</Analyses>
<StandardTemplate xmlns="http://metastock.com/imageserver/financial">
    <Title>
        <Caption>
            <Visible>true</Visible>
            <Customized>>false</Customized>
        </Caption>
        <Range>
            <Visible>true</Visible>
        </Range>
    </Title>
    <Legend>
        <Visible>true</Visible>
        <Information>Long</Information>
        <Layout>MultiLine</Layout>
        <Position>Overlaid</Position>
    </Legend>
    <Instrument>Symbol</Instrument>
    <Delimiter>%</Delimiter>
    <GridLines>Both</GridLines>
    <YAxisMarkers>None</YAxisMarkers>
    <YAxisTitles>Type</YAxisTitles>
    <Brand>None</Brand>
    <Interval>
        <CommonType xmlns="http://metastock.com/applications/data">Days</CommonType>
        <Multiplier xmlns="http://metastock.com/applications/data">1</Multiplier>
    </Interval>
    <ShowNonTradedPeriods>>false</ShowNonTradedPeriods>
    <ShowHolidays>>false</ShowHolidays>
    <ShowGaps>true</ShowGaps>
    <XAxis>
        <Visible>true</Visible>
        <Position>Bottom</Position>
        <Range>
            <Fixed>
                <First>2006-08-01T00:00:00</First>
                <Last>2007-08-01T00:00:00</Last>
            </Fixed>
        </Range>
    </XAxis>
    <Subchart>
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        <YAxis>
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            <Position>Right</Position>
            <Invert>>false</Invert>
            <Logarithmic>>false</Logarithmic>
            <Display>
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            </Display>
            <Range>
                <Automatic />
            </Range>
        </YAxis>
    </Subchart>

```



```

        <Analysis>
          <Reference>a1</Reference>
        </Analysis>
      </YAxis>
    </Subchart>
    <Subchart>
      <Weight>2</Weight>
      <YAxis>
        <Visible>true</Visible>
        <Position>Right</Position>
        <Invert>false</Invert>
        <Logarithmic>false</Logarithmic>
        <Display>
          <Mode>Automatic</Mode>
        </Display>
        <Range>
          <Automatic />
        </Range>
        <Analysis>
          <Reference>a2</Reference>
        </Analysis>
      </YAxis>
      <YAxis>
        <Visible>true</Visible>
        <Position>Left</Position>
        <Invert>false</Invert>
        <Logarithmic>false</Logarithmic>
        <Display>
          <Mode>Automatic</Mode>
        </Display>
        <Range>
          <Automatic />
        </Range>
        <Analysis>
          <Reference>a3</Reference>
        </Analysis>
      </YAxis>
    </Subchart>
    <Subchart>
      <Weight>2</Weight>
      <YAxis>
        <Visible>true</Visible>
        <Position>Right</Position>
        <Invert>false</Invert>
        <Logarithmic>false</Logarithmic>
        <Display>
          <Mode>Automatic</Mode>
        </Display>
        <Range>
          <Automatic />
        </Range>
        <Analysis>
          <Reference>a2</Reference>
        </Analysis>
      </YAxis>
    </Subchart>
  </StandardTemplate>
  <Scheme xmlns="http://metastock.com/imageserver/financial">
    <Background>
      <BackgroundMode>Hatch</BackgroundMode>
      <StartColor>
        <Named>White</Named>
      </StartColor>
      <EndColor>
        <Named>White</Named>
      </EndColor>
      <HatchStyle>Horizontal</HatchStyle>
      <GradientMode>Horizontal</GradientMode>
      <ImageMode>Centered</ImageMode>
    </Background>
    <Border>
      <Color>
        <RGB>139;139;155</RGB>
      </Color>
      <DashStyle>Solid</DashStyle>
    </Border>
  </Scheme>
</StandardTemplate>

```



```

        <Width>1</Width>
    </Border>
    <GridLines>
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            <RGB>139;139;155</RGB>
        </Color>
        <DashStyle>Dot</DashStyle>
        <Width>1</Width>
    </GridLines>
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                <Named>Black</Named>
            </Color>
            <Family>Arial</Family>
            <Style>Bold</Style>
            <Size>12</Size>
        </Caption>
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            <Color>
                <Named>Black</Named>
            </Color>
            <Family>Arial</Family>
            <Style>Regular</Style>
            <Size>8.25</Size>
        </Range>
    </Title>
    <Legend>
        <Color>
            <Named>Black</Named>
        </Color>
        <Family>Arial</Family>
        <Style>Regular</Style>
        <Size>8.25</Size>
    </Legend>
    <XAxis>
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                <Named>Black</Named>
            </Color>
            <Family>Arial</Family>
            <Style>Bold</Style>
            <Size>9.75</Size>
        </Major>
        <Minor>
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                <Named>Black</Named>
            </Color>
            <Family>Arial</Family>
            <Style>Regular</Style>
            <Size>8.25</Size>
        </Minor>
    </XAxis>
    <YAxis>
        <Major>
            <Color>
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            </Color>
            <Family>Arial</Family>
            <Style>Bold</Style>
            <Size>9.75</Size>
        </Major>
        <Minor>
            <Color>
                <Named>Black</Named>
            </Color>
            <Family>Arial</Family>
            <Style>Regular</Style>
            <Size>8.25</Size>
        </Minor>
    </YAxis>
    <Title>
        <Color>
            <Named>Black</Named>
        </Color>
        <Family>Arial</Family>
    
```



```

        <Style>Regular</Style>
        <Size>8.25</Size>
    </Title>
</YAxis>
<Series>
    <Color>
        <RGB>255;0;0</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>2</Width>
    <FillColor>
        <Named>Black</Named>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
</Series>
<Series>
    <Color>
        <RGB>51;0;153</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>2</Width>
    <FillColor>
        <Named>Red</Named>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
</Series>
<Series>
    <Color>
        <RGB>153;0;0</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
    <FillColor>
        <RGB>62;169;0</RGB>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
</Series>
<Series>
    <Color>
        <RGB>156;38;115</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
    <FillColor>
        <RGB>156;38;115</RGB>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
</Series>
<Series>
    <Color>
        <RGB>255;120;0</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
    <FillColor>
        <RGB>255;120;0</RGB>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
</Series>
<Series>
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        <RGB>25;108;229</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
    <FillColor>
        <RGB>25;108;229</RGB>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
</Series>
<Series>
    <Color>
        <RGB>60;117;28</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>

```




```

        <Width>0</Width>
        <FillColor>
            <RGB>60;117;28</RGB>
        </FillColor>
        <FillStyle>Percent20</FillStyle>
    </Series>
    <Series>
        <Color>
            <RGB>230;176;18</RGB>
        </Color>
        <DashStyle>Solid</DashStyle>
        <Width>0</Width>
        <FillColor>
            <RGB>230;176;18</RGB>
        </FillColor>
        <FillStyle>Percent20</FillStyle>
    </Series>
    <Series>
        <Color>
            <RGB>0;186;193</RGB>
        </Color>
        <DashStyle>Solid</DashStyle>
        <Width>0</Width>
        <FillColor>
            <RGB>0;186;193</RGB>
        </FillColor>
        <FillStyle>Percent20</FillStyle>
    </Series>
    <Series>
        <Color>
            <RGB>255;178;127</RGB>
        </Color>
        <DashStyle>Solid</DashStyle>
        <Width>0</Width>
        <FillColor>
            <RGB>255;178;127</RGB>
        </FillColor>
        <FillStyle>Percent20</FillStyle>
    </Series>
    <Series>
        <Color>
            <RGB>100;79;190</RGB>
        </Color>
        <DashStyle>Solid</DashStyle>
        <Width>0</Width>
        <FillColor>
            <RGB>100;79;190</RGB>
        </FillColor>
        <FillStyle>Percent20</FillStyle>
    </Series>
    <Series>
        <Color>
            <RGB>209;36;33</RGB>
        </Color>
        <DashStyle>Solid</DashStyle>
        <Width>0</Width>
        <FillColor>
            <RGB>209;36;33</RGB>
        </FillColor>
        <FillStyle>Percent20</FillStyle>
    </Series>
    <Series>
        <Color>
            <RGB>38;87;135</RGB>
        </Color>
        <DashStyle>Solid</DashStyle>
        <Width>0</Width>
        <FillColor>
            <RGB>38;87;135</RGB>
        </FillColor>
        <FillStyle>Percent20</FillStyle>
    </Series>
    <Series>
        <Color>
            <RGB>94;176;176</RGB>

```

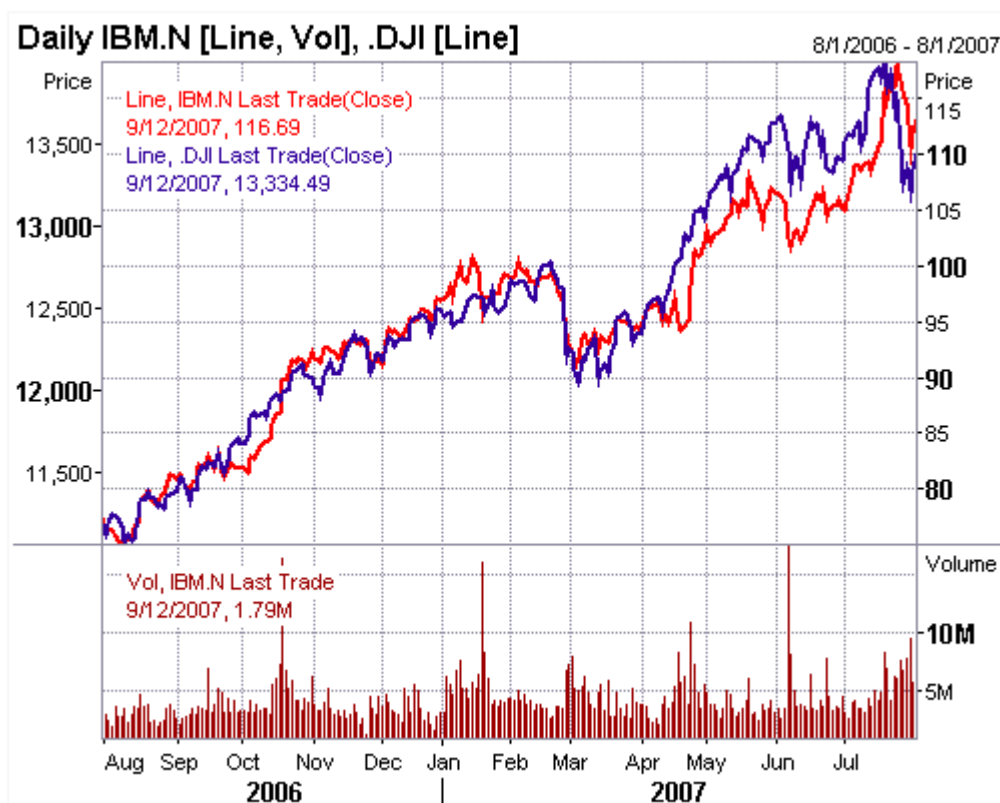


<pre> </Color> <DashStyle>Solid</DashStyle> <Width>0</Width> <FillColor> <RGB>94;176;176</RGB> </FillColor> <FillStyle>Percent20</FillStyle> </Series> <LevelLine> <Color> <RGB>0;0;153</RGB> </Color> <DashStyle>Solid</DashStyle> <Width>1</Width> </LevelLine> <LevelLine> <Color> <RGB>120;120;120</RGB> </Color> <DashStyle>Solid</DashStyle> <Width>1</Width> </LevelLine> </Scheme> </chartRequest> </GetChart_Request_2> </Body> </Envelope> </pre>
XML Sample Response - Retrieve 1Y Interday Stock Chart with Index Comparison
<pre> <s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope"> <s:Header> <a:Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Charts_1/GetChart_1_Reply</a:Action> <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo> </s:Header> <s:Body> <GetChart_Response_2 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Charts_1"> <ChartImageResult Server="api.rkd.reuters.com" Tag="9B922A44A2DB3405CD20BF63F0EBD75F" Url="http://api.rkd.reuters.com/api/charts/3139392E3234392E33332E3135/7-Sep-2007_04-29-29PM/9B922A44A2DB3405CD20BF63F0EBD75F.ashx" /> </GetChart_Response_2> </s:Body> </Envelope> </pre>

Note: After the chart is generated it will be available for 5 minutes at the specified URL.

The following is an example of a successfully built chart:





8.3.8 Retrieving 1Y Interday Percent Change Stock Chart with Index Comparison

The following request demonstrates how to retrieve the 1Y Interday Percent Change Stock Chart with Index Comparison.

XML Sample Request - Retrieve 1Y Interday Percent Change Stock Chart with Index Comparison

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Charts/Charts.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Charts_1/GetChart_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetChart_Request_2 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Charts_1">
      <chartRequest ImageType="PNG" Width="500" Height="400" Culture="en-US">
        <TimeSeries>
          <TimeSeriesRequest xmlns="http://metastock.com/imageserver/financial">
            <Symbol>IBM.N</Symbol>
            <Reference>d1</Reference>
          </TimeSeriesRequest>
          <TimeSeriesRequest xmlns="http://metastock.com/imageserver/financial">
            <Symbol>.DJI</Symbol>
            <Reference>d2</Reference>
          </TimeSeriesRequest>
        </TimeSeries>
        <Analyses>
          <Analysis xmlns="http://metastock.com/imageserver/analysis">
            <Reference>a1</Reference>
          </Analysis>
        </Analyses>
      </chartRequest>
    </GetChart_Request_2>
  </Body>
</Envelope>
```



```

        <PctCng>
            <Instrument1>
                <Reference>d1</Reference>
            </Instrument1>
            <PercentChangeSelector>SpecifiedDate</PercentChangeSelector>
            <SpecifiedDate>2006-08-01T00:00:00</SpecifiedDate>
        </PctCng>
    </Analysis>
    <Analysis xmlns="http://metastock.com/imageserver/analysis">
        <Reference>a2</Reference>
        <Vol>
            <Instrument1>
                <Reference>d1</Reference>
            </Instrument1>
        </Vol>
    </Analysis>
    <Analysis xmlns="http://metastock.com/imageserver/analysis">
        <Reference>a3</Reference>
        <PctCng>
            <Instrument1>
                <Reference>d2</Reference>
            </Instrument1>
            <PercentChangeSelector>SpecifiedDate</PercentChangeSelector>
            <SpecifiedDate>2006-08-01T00:00:00</SpecifiedDate>
        </PctCng>
    </Analysis>
</Analyses>
<StandardTemplate xmlns="http://metastock.com/imageserver/financial">
    <Title>
        <Caption>
            <Visible>true</Visible>
            <Customized>>false</Customized>
        </Caption>
        <Range>
            <Visible>true</Visible>
        </Range>
    </Title>
    <Legend>
        <Visible>true</Visible>
        <Information>Long</Information>
        <Layout>MultiLine</Layout>
        <Position>Overlaid</Position>
    </Legend>
    <Instrument>Symbol</Instrument>
    <Delimiter>%</Delimiter>
    <GridLines>Both</GridLines>
    <YAxisMarkers>None</YAxisMarkers>
    <YAxisTitles>None</YAxisTitles>
    <Brand>None</Brand>
    <Interval>
        <CommonType xmlns="http://metastock.com/applications/data">Days</CommonType>
        <Multiplier xmlns="http://metastock.com/applications/data">1</Multiplier>
    </Interval>
    <ShowNonTradedPeriods>>false</ShowNonTradedPeriods>
    <ShowHolidays>>false</ShowHolidays>
    <ShowGaps>true</ShowGaps>
    <XAxis>
        <Visible>true</Visible>
        <Position>Bottom</Position>
        <Range>
            <Fixed>
                <First>2006-08-01T00:00:00</First>
                <Last>2007-08-01T00:00:00</Last>
            </Fixed>
        </Range>
    </XAxis>
    <Subchart>
        <Weight>6</Weight>
        <YAxis>
            <Visible>true</Visible>
            <Position>Right</Position>
            <Invert>>false</Invert>
            <Logarithmic>>false</Logarithmic>
            <Display>
                <Mode>Automatic</Mode>
            </Display>
        </YAxis>
    </Subchart>

```



```

        </Display>
        <Range>
          <Automatic />
        </Range>
        <Analysis>
          <Reference>a1</Reference>
        </Analysis>
      </YAxis>
    </Subchart>
    <Subchart>
      <Weight>2</Weight>
      <YAxis>
        <Visible>true</Visible>
        <Position>Right</Position>
        <Invert>false</Invert>
        <Logarithmic>false</Logarithmic>
        <Display>
          <Mode>Automatic</Mode>
        </Display>
        <Range>
          <Automatic />
        </Range>
        <Analysis>
          <Reference>a2</Reference>
        </Analysis>
      </YAxis>
    </Subchart>
  </StandardTemplate>
  <Scheme xmlns="http://metastock.com/imageserver/financial">
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      <BackgroundMode>Hatch</BackgroundMode>
      <StartColor>
        <Named>White</Named>
      </StartColor>
      <EndColor>
        <Named>White</Named>
      </EndColor>
      <HatchStyle>Horizontal</HatchStyle>
      <GradientMode>Horizontal</GradientMode>
      <ImageMode>Centered</ImageMode>
    </Background>
    <Border>
      <Color>
        <RGB>139;139;155</RGB>
      </Color>
      <DashStyle>Solid</DashStyle>
      <Width>1</Width>
    </Border>
    <GridLines>
      <Color>
        <RGB>139;139;155</RGB>
      </Color>
      <DashStyle>Dot</DashStyle>
      <Width>1</Width>
    </GridLines>
    <Title>
      <Caption>
        <Color>
          <Named>Black</Named>
        </Color>
        <Family>Arial</Family>
        <Style>Bold</Style>
        <Size>12</Size>
      </Caption>
      <Range>
        <Color>
          <Named>Black</Named>
        </Color>
        <Family>Arial</Family>
        <Style>Regular</Style>
        <Size>8.25</Size>
      </Range>
    </Title>
    <Legend>
      <Color>

```



```

        <Named>Black</Named>
    </Color>
    <Family>Arial</Family>
    <Style>Regular</Style>
    <Size>8.25</Size>
</Legend>
<XAxis>
    <Major>
        <Color>
            <RGB>0;51;0</RGB>
        </Color>
        <Family>Arial</Family>
        <Style>Bold</Style>
        <Size>9.75</Size>
    </Major>
    <Minor>
        <Color>
            <RGB>0;51;0</RGB>
        </Color>
        <Family>Arial</Family>
        <Style>Regular</Style>
        <Size>8.25</Size>
    </Minor>
</XAxis>
<YAxis>
    <Major>
        <Color>
            <RGB>0;51;0</RGB>
        </Color>
        <Family>Arial</Family>
        <Style>Bold</Style>
        <Size>9.75</Size>
    </Major>
    <Minor>
        <Color>
            <RGB>0;51;0</RGB>
        </Color>
        <Family>Arial</Family>
        <Style>Regular</Style>
        <Size>8.25</Size>
    </Minor>
    <Title>
        <Color>
            <RGB>0;51;0</RGB>
        </Color>
        <Family>Arial</Family>
        <Style>Regular</Style>
        <Size>8.25</Size>
    </Title>
</YAxis>
<Series>
    <Color>
        <RGB>0;102;0</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>1</Width>
    <FillColor>
        <Named>Black</Named>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
</Series>
<Series>
    <Color>
        <RGB>255;51;0</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>1</Width>
    <FillColor>
        <Named>Red</Named>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
</Series>
<Series>
    <Color>
        <RGB>51;153;51</RGB>

```



```

        </Color>
        <DashStyle>Solid</DashStyle>
        <Width>0</Width>
        <FillColor>
            <RGB>62;169;0</RGB>
        </FillColor>
        <FillStyle>Percent20</FillStyle>
    </Series>
    <Series>
        <Color>
            <RGB>156;38;115</RGB>
        </Color>
        <DashStyle>Solid</DashStyle>
        <Width>0</Width>
        <FillColor>
            <RGB>156;38;115</RGB>
        </FillColor>
        <FillStyle>Percent20</FillStyle>
    </Series>
    <Series>
        <Color>
            <RGB>255;120;0</RGB>
        </Color>
        <DashStyle>Solid</DashStyle>
        <Width>0</Width>
        <FillColor>
            <RGB>255;120;0</RGB>
        </FillColor>
        <FillStyle>Percent20</FillStyle>
    </Series>
    <Series>
        <Color>
            <RGB>25;108;229</RGB>
        </Color>
        <DashStyle>Solid</DashStyle>
        <Width>0</Width>
        <FillColor>
            <RGB>25;108;229</RGB>
        </FillColor>
        <FillStyle>Percent20</FillStyle>
    </Series>
    <Series>
        <Color>
            <RGB>60;117;28</RGB>
        </Color>
        <DashStyle>Solid</DashStyle>
        <Width>0</Width>
        <FillColor>
            <RGB>60;117;28</RGB>
        </FillColor>
        <FillStyle>Percent20</FillStyle>
    </Series>
    <Series>
        <Color>
            <RGB>230;176;18</RGB>
        </Color>
        <DashStyle>Solid</DashStyle>
        <Width>0</Width>
        <FillColor>
            <RGB>230;176;18</RGB>
        </FillColor>
        <FillStyle>Percent20</FillStyle>
    </Series>
    <Series>
        <Color>
            <RGB>0;186;193</RGB>
        </Color>
        <DashStyle>Solid</DashStyle>
        <Width>0</Width>
        <FillColor>
            <RGB>0;186;193</RGB>
        </FillColor>
        <FillStyle>Percent20</FillStyle>
    </Series>
    <Series>

```



```

        <Color>
          <RGB>255;178;127</RGB>
        </Color>
        <DashStyle>Solid</DashStyle>
        <Width>0</Width>
        <FillColor>
          <RGB>255;178;127</RGB>
        </FillColor>
        <FillStyle>Percent20</FillStyle>
      </Series>
      <Series>
        <Color>
          <RGB>100;79;190</RGB>
        </Color>
        <DashStyle>Solid</DashStyle>
        <Width>0</Width>
        <FillColor>
          <RGB>100;79;190</RGB>
        </FillColor>
        <FillStyle>Percent20</FillStyle>
      </Series>
      <Series>
        <Color>
          <RGB>209;36;33</RGB>
        </Color>
        <DashStyle>Solid</DashStyle>
        <Width>0</Width>
        <FillColor>
          <RGB>209;36;33</RGB>
        </FillColor>
        <FillStyle>Percent20</FillStyle>
      </Series>
      <Series>
        <Color>
          <RGB>38;87;135</RGB>
        </Color>
        <DashStyle>Solid</DashStyle>
        <Width>0</Width>
        <FillColor>
          <RGB>38;87;135</RGB>
        </FillColor>
        <FillStyle>Percent20</FillStyle>
      </Series>
      <Series>
        <Color>
          <RGB>94;176;176</RGB>
        </Color>
        <DashStyle>Solid</DashStyle>
        <Width>0</Width>
        <FillColor>
          <RGB>94;176;176</RGB>
        </FillColor>
        <FillStyle>Percent20</FillStyle>
      </Series>
      <LevelLine>
        <Color>
          <RGB>120;120;120</RGB>
        </Color>
        <DashStyle>Solid</DashStyle>
        <Width>1</Width>
      </LevelLine>
    </Scheme>
  </chartRequest>
</GetChart_Request_2>
</Body>
</Envelope>

```

XML Sample Response - Retrieve 1Y Interday Percent Change Stock Chart with Index Comparison

```

<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/
    rkd/Charts_1/GetChart_1_Reply
  </a:Action>

```



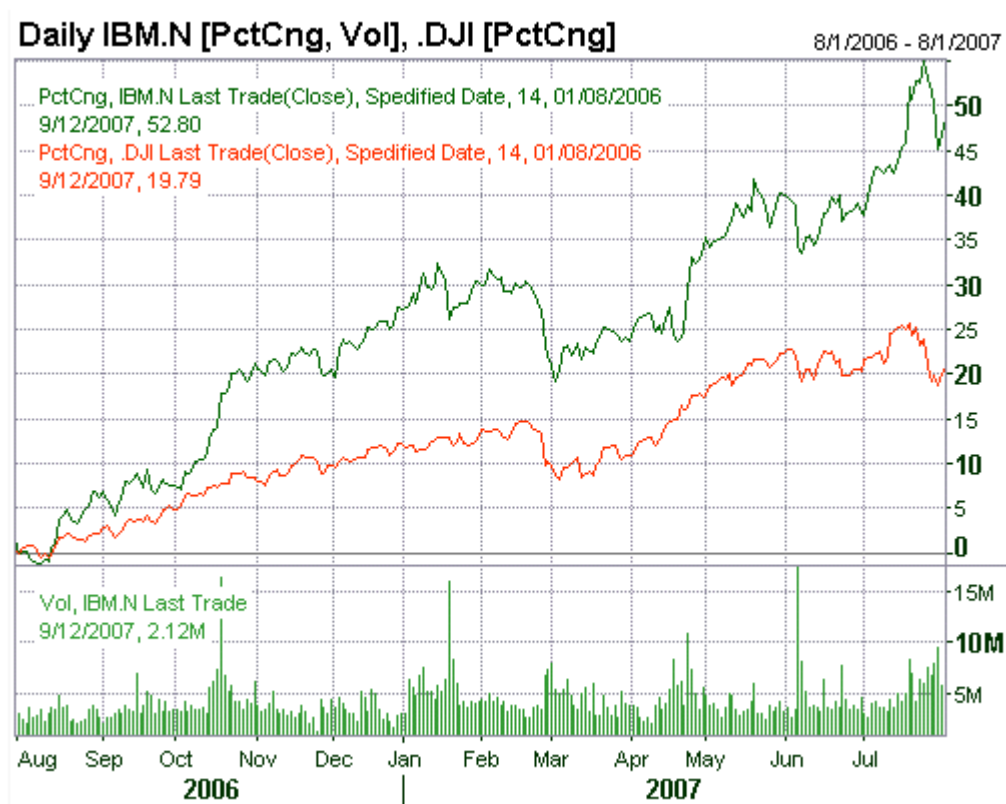

```

</a:Action>
<a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
</s:Header>
<s:Body>
  <GetChart_Response_2 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Charts_1">
    <ChartImageResult Server="api.rkd.reuters.com" Tag="7089F648B00DF2D96764F5D0BB54F445" Url="http://api.rkd.reuters.com/api/
    charts/3139392E3234392E33332E3135/10-Sep-2007__11-43-46AM/7089F648B00DF2D96764F5D0BB54F445.ashx" />
  </GetChart_Response_2>
</Body>
</Envelope>

```

Note: After the chart is generated it will be available for 5 minutes at the specified URL.

The following is an example of a successfully built chart:



8.3.9 Retrieving 5 Day Intraday Dual Stock Chart with Simple Moving Average

The following request demonstrates how to retrieve the 5 Day Intraday Dual Stock Chart with Simple Moving Average.

XML Sample Request - Retrieve 5 Day Intraday Dual Stock Chart with Simple Moving Average

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Charts/Charts.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Charts_1/
    GetChart_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetChart_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Charts_1">
      <ChartImageResult Server="api.rkd.reuters.com" Tag="7089F648B00DF2D96764F5D0BB54F445" Url="http://api.rkd.reuters.com/api/
      charts/3139392E3234392E33332E3135/10-Sep-2007__11-43-46AM/7089F648B00DF2D96764F5D0BB54F445.ashx" />
    </GetChart_1>
  </Body>
</Envelope>

```



```

    </Authorization>
  </Header>
  <Body>
    <GetChart_Request_2 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Charts_1">
      <chartRequest ImageType="PNG" Width="500" Height="400" Culture="en-US">
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          <TimeSeriesRequest xmlns="http://metastock.com/imageserver/financial">
            <Symbol>IBM.N</Symbol>
            <Reference>d1</Reference>
          </TimeSeriesRequest>
          <TimeSeriesRequest xmlns="http://metastock.com/imageserver/financial">
            <Symbol>MSFT.O</Symbol>
            <Reference>d2</Reference>
          </TimeSeriesRequest>
        </TimeSeries>
        <Analyses>
          <Analysis xmlns="http://metastock.com/imageserver/analysis">
            <Reference>a1</Reference>
            <OHLC>
              <Instrument1>
                <Reference>d1</Reference>
              </Instrument1>
            </OHLC>
          </Analysis>
          <Analysis xmlns="http://metastock.com/imageserver/analysis">
            <Reference>a2</Reference>
            <Vol>
              <Instrument1>
                <Reference>d1</Reference>
              </Instrument1>
            </Vol>
          </Analysis>
          <Analysis xmlns="http://metastock.com/imageserver/analysis">
            <Reference>a3</Reference>
            <Line>
              <Instrument1>
                <Reference>d2</Reference>
              </Instrument1>
            </Line>
          </Analysis>
          <Analysis xmlns="http://metastock.com/imageserver/analysis">
            <Reference>sma</Reference>
            <SMA>
              <Instrument1>
                <Reference>d1</Reference>
              </Instrument1>
            </SMA>
          </Analysis>
        </Analyses>
        <StandardTemplate xmlns="http://metastock.com/imageserver/financial">
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            <Caption>
              <Visible>true</Visible>
              <Customized>>false</Customized>
            </Caption>
            <Range>
              <Visible>true</Visible>
            </Range>
          </Title>
          <Legend>
            <Visible>true</Visible>
            <Information>Short</Information>
            <Layout>WrappedLine</Layout>
            <Position>Below</Position>
          </Legend>
          <Instrument>Symbol</Instrument>
          <Delimiter>%</Delimiter>
          <GridLines>None</GridLines>
          <YAxisMarkers>None</YAxisMarkers>
          <YAxisTitles>Type</YAxisTitles>
          <Brand>None</Brand>
          <Interval>
            <CommonType xmlns="http://metastock.com/applications/data">Hours</CommonType>
            <Multiplier xmlns="http://metastock.com/applications/data">1</Multiplier>
          </Interval>
        </StandardTemplate>
      </chartRequest>
    </GetChart_Request_2>
  </Body>

```



```

<ShowNonTradedPeriods>false</ShowNonTradedPeriods>
<ShowHolidays>false</ShowHolidays>
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      <Last>2007-08-01T00:00:00</Last>
    </Fixed>
  </Range>
</XAxis>
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  <YAxis>
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    <Invert>false</Invert>
    <Logarithmic>false</Logarithmic>
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    </Display>
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      <Automatic />
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    <Invert>false</Invert>
    <Logarithmic>false</Logarithmic>
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  <YAxis>
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    <Position>Right</Position>
    <Invert>false</Invert>
    <Logarithmic>false</Logarithmic>
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    </Display>
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    </Range>
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    </Analysis>
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<Subchart>
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    <Logarithmic>false</Logarithmic>
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    </Display>
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    <Analysis>

```



```

        <Reference>a2</Reference>
      </Analysis>
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    </StartColor>
    <EndColor>
      <Named>Black</Named>
    </EndColor>
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    <GradientMode>Horizontal</GradientMode>
    <ImageMode>Centered</ImageMode>
  </Background>
  <Border>
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      <RGB>139;139;155</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>1</Width>
  </Border>
  <GridLines>
    <Color>
      <RGB>139;139;155</RGB>
    </Color>
    <DashStyle>Dot</DashStyle>
    <Width>1</Width>
  </GridLines>
  <Title>
    <Caption>
      <Color>
        <RGB>255;255;0</RGB>
      </Color>
      <Family>Arial</Family>
      <Style>Bold</Style>
      <Size>12</Size>
    </Caption>
    <Range>
      <Color>
        <Named>LightGray</Named>
      </Color>
      <Family>Arial</Family>
      <Style>Regular</Style>
      <Size>8.25</Size>
    </Range>
  </Title>
  <Legend>
    <Color>
      <Named>LightGray</Named>
    </Color>
    <Family>Arial</Family>
    <Style>Regular</Style>
    <Size>8.25</Size>
  </Legend>
  <XAxis>
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        <Named>LightGray</Named>
      </Color>
      <Family>Arial</Family>
      <Style>Bold</Style>
      <Size>9.75</Size>
    </Major>
    <Minor>
      <Color>
        <Named>LightGray</Named>
      </Color>
      <Family>Arial</Family>
      <Style>Regular</Style>
      <Size>8.25</Size>
    </Minor>
  </XAxis>
</Scheme>

```



```

</XAxis>
<YAxis>
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    </Color>
    <Family>Arial</Family>
    <Style>Bold</Style>
    <Size>9.75</Size>
  </Major>
  <Minor>
    <Color>
      <Named>LightGray</Named>
    </Color>
    <Family>Arial</Family>
    <Style>Regular</Style>
    <Size>8.25</Size>
  </Minor>
  <Title>
    <Color>
      <Named>LightGray</Named>
    </Color>
    <Family>Arial</Family>
    <Style>Regular</Style>
    <Size>8.25</Size>
  </Title>
</YAxis>
<Series>
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  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
    <Named>Black</Named>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<Series>
  <Color>
    <RGB>255;51;0</RGB>
  </Color>
  <DashStyle>Solid</DashStyle>
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  <FillColor>
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  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<Series>
  <Color>
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  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
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  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<Series>
  <Color>
    <RGB>0;204;0</RGB>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
    <RGB>156;38;115</RGB>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<Series>
  <Color>
    <RGB>255;120;0</RGB>
  </Color>

```



```

    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
    <FillColor>
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    </FillColor>
    <FillStyle>Percent20</FillStyle>
  </Series>
  <Series>
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    </Color>
    <DashStyle>Solid</DashStyle>
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    </FillColor>
    <FillStyle>Percent20</FillStyle>
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  <Series>
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    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
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    </FillColor>
    <FillStyle>Percent20</FillStyle>
  </Series>
  <Series>
    <Color>
      <RGB>230;176;18</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
    <FillColor>
      <RGB>230;176;18</RGB>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
  </Series>
  <Series>
    <Color>
      <RGB>0;186;193</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
    <FillColor>
      <RGB>0;186;193</RGB>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
  </Series>
  <Series>
    <Color>
      <RGB>255;178;127</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
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    </FillColor>
    <FillStyle>Percent20</FillStyle>
  </Series>
  <Series>
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    <Width>0</Width>
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    </FillColor>
    <FillStyle>Percent20</FillStyle>
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  <Series>
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```

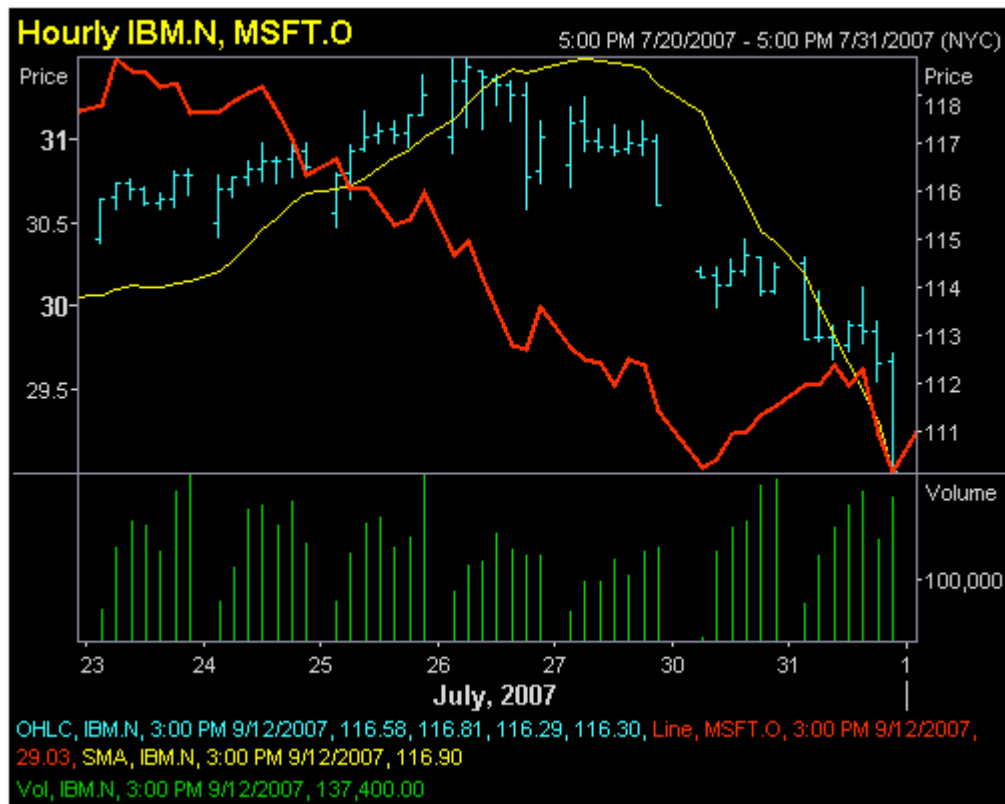


<pre> <RGB>209;36;33</RGB> </Color> <DashStyle>Solid</DashStyle> <Width>0</Width> <FillColor> <RGB>209;36;33</RGB> </FillColor> <FillStyle>Percent20</FillStyle> </Series> <Series> <Color> <RGB>38;87;135</RGB> </Color> <DashStyle>Solid</DashStyle> <Width>0</Width> <FillColor> <RGB>38;87;135</RGB> </FillColor> <FillStyle>Percent20</FillStyle> </Series> <Series> <Color> <RGB>94;176;176</RGB> </Color> <DashStyle>Solid</DashStyle> <Width>0</Width> <FillColor> <RGB>94;176;176</RGB> </FillColor> <FillStyle>Percent20</FillStyle> </Series> <LevelLine> <Color> <RGB>0;0;153</RGB> </Color> <DashStyle>Solid</DashStyle> <Width>1</Width> </LevelLine> <LevelLine> <Color> <RGB>120;120;120</RGB> </Color> <DashStyle>Solid</DashStyle> <Width>1</Width> </LevelLine> </Scheme> </chartRequest> </GetChart_Request_2> </Body> </Envelope> </pre>
XML Sample Response - Retrieve 5 Day Intraday Dual Stock Chart with Simple Moving Average
<pre> <s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope"> <s:Header> <a:Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Charts_1/GetChart_1_Reply</a:Action> <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo> </s:Header> <s:Body> <GetChart_Response_2 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Charts_1"> <ChartImageResult Server="api.rkd.reuters.com" Tag="54058FAB0E171AE4277E62119F356278" Url="http://api.rkd.reuters.com/api/charts/3136372E37362E3132332E313037/10-Sep-2007_01-19-19PM/54058FAB0E171AE4277E62119F356278.ashx" /> </GetChart_Response_2> </s:Body> </Envelope> </pre>

Note: Most charts are available for 5 minutes at the specified URL, while one-minute charts - for 20 seconds, and five-minute charts - for 1 minute.



The following is an example of a successfully built chart:



8.3.10 Retrieving 1 Day Intraday Stock Chart

The following request demonstrates how to retrieve the 1 Day Intraday Stock Chart.

XML Sample Request - Retrieve 1 Day Intraday Stock Chart

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Charts/Charts.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Charts_1/GetChart_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetChart_Request_2 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Charts_1">
      <chartRequest ImageType="PNG" Width="500" Height="400" Culture="en-US">
        <TimeSeries>
          <TimeSeriesRequest xmlns="http://metastock.com/imageserver/financial">
            <Symbol>IBM.N</Symbol>
            <Reference>d1</Reference>
          </TimeSeriesRequest>
        </TimeSeries>
        <Analyses>
          <Analysis xmlns="http://metastock.com/imageserver/analysis">
            <Reference>a1</Reference>
          </Analysis>
        </Analyses>
      </chartRequest>
    </GetChart_Request_2>
  </Body>
</Envelope>
```




```

        <Instrument1>
          <Reference>d1</Reference>
        </Instrument1>
        <Series1>
          <Name>FilledLine</Name>
        </Series1>
      </Line>
    </Analysis>
  </Analyses>
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      <Customized>>false</Customized>
    </Caption>
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      <Visible>true</Visible>
    </Range>
  </Title>
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    <Layout>MultiLine</Layout>
    <Position>Overlaid</Position>
  </Legend>
  <Instrument>Symbol</Instrument>
  <Delimiter>%</Delimiter>
  <GridLines>Both</GridLines>
  <YAxisMarkers>None</YAxisMarkers>
  <YAxisTitles>Type Currency</YAxisTitles>
  <Brand>None</Brand>
  <Interval>
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    <Multiplier xmlns="http://metastock.com/applications/data">1</Multiplier>
  </Interval>
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  <ShowHolidays>>false</ShowHolidays>
  <ShowGaps>true</ShowGaps>
  <XAxis>
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    <Range>
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        <First>2007-08-01T00:00:00</First>
        <Last>2007-08-02T00:00:00</Last>
      </Fixed>
    </Range>
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      <Logarithmic>>false</Logarithmic>
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        <Mode>Automatic</Mode>
      </Display>
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      </Range>
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      </Analysis>
    </YAxis>
  </Subchart>
</StandardTemplate>
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    </StartColor>
    <EndColor>
      <Named>White</Named>
    </EndColor>
  </Background>

```



```

        </EndColor>
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        <GradientMode>ForwardDiagonal</GradientMode>
        <ImageMode>Centered</ImageMode>
    </Background>
    <Border>
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        <Width>1</Width>
    </Border>
    <GridLines>
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            <RGB>139;139;155</RGB>
        </Color>
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        <Width>1</Width>
    </GridLines>
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            </Color>
            <Family>Arial</Family>
            <Style>Bold</Style>
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            <Style>Regular</Style>
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    <Legend>
        <Color>
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        </Color>
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        <Style>Regular</Style>
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    </Legend>
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                <RGB>51;0;102</RGB>
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            <Style>Regular</Style>
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            </Color>
            <Family>Arial</Family>
            <Style>Regular</Style>
            <Size>8.25</Size>
        </Minor>
    </YAxis>

```



```

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        <Style>Regular</Style>
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        <Style>Regular</Style>
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</Series>
<Series>
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    </Color>
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        <RGB>62;169;0</RGB>
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    </Color>
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    </FillColor>
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</Series>
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    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
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    </FillColor>
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</Series>
<Series>
    <Color>
        <RGB>25;108;229</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>

```



```

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            <RGB>25;108;229</RGB>
        </FillColor>
        <FillStyle>Percent20</FillStyle>
    </Series>
    <Series>
        <Color>
            <RGB>60;117;28</RGB>
        </Color>
        <DashStyle>Solid</DashStyle>
        <Width>0</Width>
        <FillColor>
            <RGB>60;117;28</RGB>
        </FillColor>
        <FillStyle>Percent20</FillStyle>
    </Series>
    <Series>
        <Color>
            <RGB>230;176;18</RGB>
        </Color>
        <DashStyle>Solid</DashStyle>
        <Width>0</Width>
        <FillColor>
            <RGB>230;176;18</RGB>
        </FillColor>
        <FillStyle>Percent20</FillStyle>
    </Series>
    <Series>
        <Color>
            <RGB>0;186;193</RGB>
        </Color>
        <DashStyle>Solid</DashStyle>
        <Width>0</Width>
        <FillColor>
            <RGB>0;186;193</RGB>
        </FillColor>
        <FillStyle>Percent20</FillStyle>
    </Series>
    <Series>
        <Color>
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        </Color>
        <DashStyle>Solid</DashStyle>
        <Width>0</Width>
        <FillColor>
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        <FillStyle>Percent20</FillStyle>
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    <Series>
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            <RGB>100;79;190</RGB>
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        <DashStyle>Solid</DashStyle>
        <Width>0</Width>
        <FillColor>
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        </FillColor>
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        </Color>
        <DashStyle>Solid</DashStyle>
        <Width>0</Width>
        <FillColor>
            <RGB>209;36;33</RGB>
        </FillColor>
        <FillStyle>Percent20</FillStyle>
    </Series>
    <Series>
        <Color>
            <RGB>38;87;135</RGB>
        </Color>

```

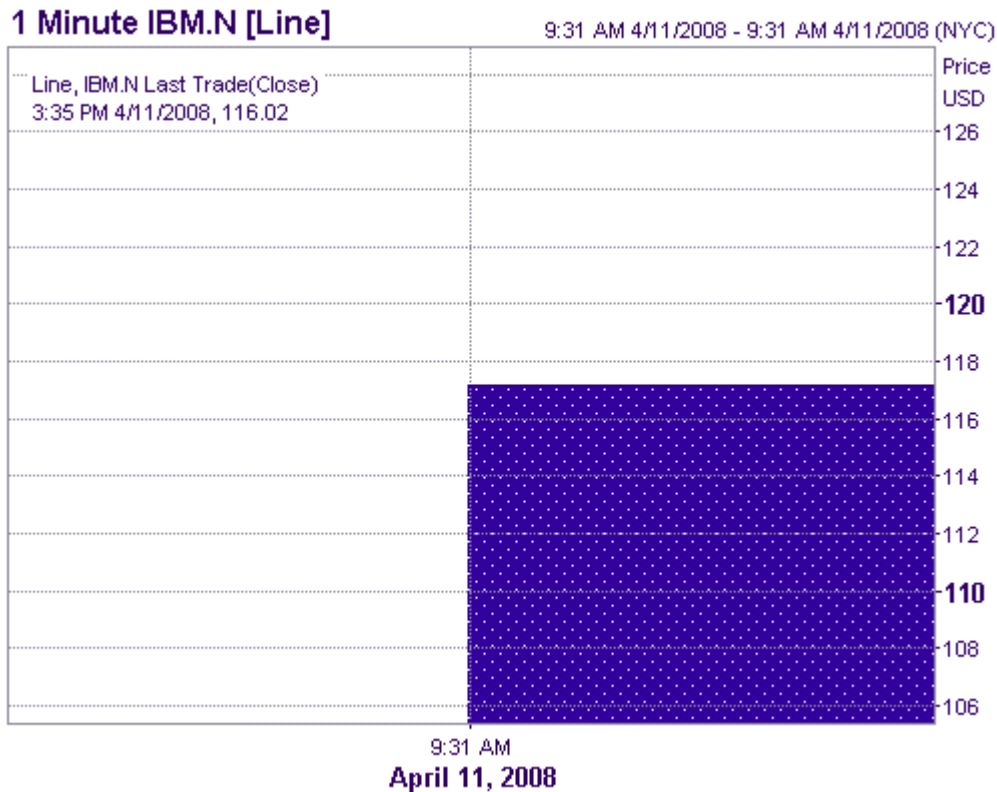


<pre> <DashStyle>Solid</DashStyle> <Width>0</Width> <FillColor> <RGB>38;87;135</RGB> </FillColor> <FillStyle>Percent20</FillStyle> </Series> <Series> <Color> <RGB>94;176;176</RGB> </Color> <DashStyle>Solid</DashStyle> <Width>0</Width> <FillColor> <RGB>94;176;176</RGB> </FillColor> <FillStyle>Percent20</FillStyle> </Series> <LevelLine> <Color> <RGB>0;0;153</RGB> </Color> <DashStyle>Solid</DashStyle> <Width>1</Width> </LevelLine> <LevelLine> <Color> <RGB>120;120;120</RGB> </Color> <DashStyle>Solid</DashStyle> <Width>1</Width> </LevelLine> </Scheme> </chartRequest> </GetChart_Request_2> </Body> </Envelope> </pre>
XML Sample Response - Retrieve 1 Day Intraday Stock Chart
<pre> <s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope"> <s:Header> <a:Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/ rkd/Charts_1/GetChart_1_Reply </a:Action> <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo> </s:Header> <s:Body> <GetChart_Response_2 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Charts_1"> <ChartImageResult Server="api.rkd.reuters.com" Tag="442B938C49A9B8A80FA14EF2EACA7F76" Url="http://api.rkd.reuters.com/api/ charts/3136372E37362E3132332E313037/10-Sep-2007_01-59-59PM/442B938C49A9B8A80FA14EF2EACA7F76.ashx" /> </GetChart_Response_2> </s:Body> </Envelope> </pre>

Note: Most charts are available for 5 minutes at the specified URL, while one-minute charts - for 20 seconds, and five-minute charts - for 1 minute.

The following is an example of a successfully built chart:





8.4 Understanding Reuters Charts Response

When a valid chart request is sent the chart is created with a unique Tag by which it can be retrieved.

Note: Most charts are available for 5 minutes at the specified URL, while one-minute charts - for 20 seconds, and five-minute charts - for 1 minute.

XML Sample Response - Get Reuters Charts

```
<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" s:mustUnderstand="1"> http://www.reuters.com/ns/2006/05/01/webservices/
    rkd/http://www.reuters.com/ns/2006/05/01/webservices/rkd/
    </a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
    </s:Header>
    <s:Body>
      <GetChart_Response_2 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Charts_1">
        <ChartImageResult Server="[server]" Tag="A8A510AD1879D3DA8CDB7FF4D02B0BFA" Url="http://[server]/api/
        charts/31302E39302E312E3837/19-Jun-2007_10-03-44PM/A8A510AD1879D3DA8CDB7FF4D02B0BFA.ashx" />
      </GetChart_Response_2>
    </s:Body>
  </Envelope>
```

Attribute	Description
Server	Server where the image is located.
Tag	Image ID.
Url	Url location of the image.



Note: If you receive "Error Currency Conversion not supported" error, try putting different currencies on different axes in the same chart. For example, if you plot TRIL.L and .DJI on the same axis then the second item isn't plotted and the image contains the error message above.

The following is an example of a successfully built chart:



8.5 Analyses List

The following is the list of Analysis you are able to perform in Reuters Charts.

Code	Analysis Name
AbsCng	Absolute Change
HL	Bar - High/Low
HLC	Bar - High/Low/Close
OHLC	Bar - Open/High/Low/Close
BBand	Bollinger Bands
Candle	Candle
ChkMF	Chaikin Money Flow
CCI	Commodity Channel Index
Envlp	Envelopes - Percentage
Invrs	Inverse
Line	Line
MACD	MACD
MACDF	MACD Forest/Histogram
MdnP	Median Price



Mom	Momentum
EMA	Moving Average - Exponential
SMA	Moving Average - Simple
WMA	Moving Average - Weighted
OBV	On Balance Volume
OBVW	On Balance Volume - Weighted
Osc	Oscillator
PctCng	Percent Change
PctR	Percent R
ROC	Rate of Change
Ratio	Ratio
IPP	Indexed Price Performance/Rebasing
RelPrf	Relative Performance
RSI	Relative Strength Index
Spread	Spread (Views)
StochF	Stochastics - Fast
StochS	Stochastics - Slow
VltyCC	Volatility Close-to-Close
Vol	Volume
WClose	Weighted Close
Yield	Yield
Yield Spread	Yield Spread

8.6 How to Build a Chart

This chapter provides instructions and request examples that will help you build your own charts.

8.6.1 Making Chart Request

In order to build a chart, first you need to fetch data. To do so, use the Time Series section of the form in the Request Builder:

TIME SERIES

☒ **Xml** - [Remove](#)

Reference:

Symbol:

Field:

Data Provider:

Feed:

Request Range

Type:

[Add Xml or Uri](#)



After you have fetched data, you can apply different analyses to it. The analysis data is then used to plot the series on the chart.

ANALYSES

[-] Xml - Remove

Reference/Type*:

a1

Line (Line)

☒ Instrument 1

Reference

d1

Action:

☒ Series 1

Name: _____

FilledLine

Symbol:

- Line (Line)
- MACD (MACD)
- MACD Forest (MACDF)
- Median Price (MdnP)
- Momentum (Mom)
- Moving Average - Exponential (EMA)
- Moving Average - Simple (SMA)
- Moving Average - Weighted (WMA)
- On Balance Volume (OBV)
- On Balance Volume Weighted (OBVW)
- Oscillator (Osc)

Add Xml or Uri

You can specify the reference for this Analysis as any string of your choice (in the example above it is "a1"). You will need to use this reference when you specify which subchart and axis you want to plot it on.

Now when you have data to plot, you should arrange the different series on subcharts. Each subchart is an individual set of Y-Axis (up to two independent) and can have several series plotted on it. All subcharts share the same global X-Axis (time).

Any subchart has the Weight property, which defines how much space it will take on the global chart, as compared to other subcharts. To add Y-Axis use the corresponding link - "**Add Y-Axis**".

One Y-Axis can contain several analyses, you just need to make sure the resulting series have the same units and close ranges of values. You can specify the location of the axis: left or right, the range of values, and some other properties.

To add analysis to the Y-Axis use the corresponding link:

Y-Axis

Remove

Options:

☒ Visible
 ☐ Invert
 ☐ Logarithmic

Position*:

Left

Display Mode*:

Automatic

Range*:

Automatic

Analyses:

Add Analysis

Use the ID you specified when creating analysis to reference it (in the example the reference to the analysis is "a1"):

Analyses:

ANALYSIS

Remove

Reference*:

a1

Corporate Events:

Corporate Events Visible:

Add Field

Level Lines:

Add Field

Add Analysis

After you have arranged all needed analyses into the corresponding subcharts and Y-Axis, you should check the resulting series sequence in order to determine the exact number of each individual line to configure the line styles respectively.



Series

Series Line*:	 153;0;0		 Solid		2	Remove
Fill*:	Large Checker Board		 Black			
Series Line*:	 153;0;0		 Solid		2	Remove
Fill*:	20 Percent		 Red			
Series Line*:	 Black		 Solid		0	Remove
Fill*:	20 Percent		 62;169;0			
Series Line*:	 Black		 Solid		0	Remove

Note: Sometimes the difference between values for Y-axis is too small to be displayed on a chart. In such case please use the "Precision" parameter of the Display element in the Subchart section which specifies the number of digits after decimal points in display unit format (nonnegative integer only). See examples below:



Below is the same chart with the "Precision" parameter specified:

```
<Display>
  <Mode>Decimal</Mode>
  <Precision>6</Precision>
</Display>
```





Note that the "Precision" parameter is ignored, if the "Automatic" Display Mode is selected.

8.6.1.1 Example 1

For example we have two data fetches "d1" and "d2" (e.g. 'MSFT.O' and '.DJI'). The first one has 2 analyses applied to it "a1" and "a2" (PctCng and Vol). The second one has only one analysis "a3" (PctCng). You want to plot PctCng for both RICs on the same subchart, and since they have the same value units (%) and most likely the same range (from -100% to +100% as maximum) you can plot both on the same Y-Axis. And the Vol is usually plotted on a separate subchart below the main one. On the form you will have something like this:

Time Series

Reference: d1
 Symbol: MSFT.O
 Reference: d2
 Symbol: .DJI

Analyses

Reference: a1
 Type: PctCng
 Instrument: d1
 Reference: a2
 Type: Vol
 Instrument: d1
 Reference: a3
 Type: PctCng
 Instrument: d2

Chart

X-Axis
 Subchart, Weight: 5
 Y-Axis
 Analysis 'a1'
 Analysis 'a3'
 Subchart, Weight: 2
 Y-Axis
 Analysis 'a2'

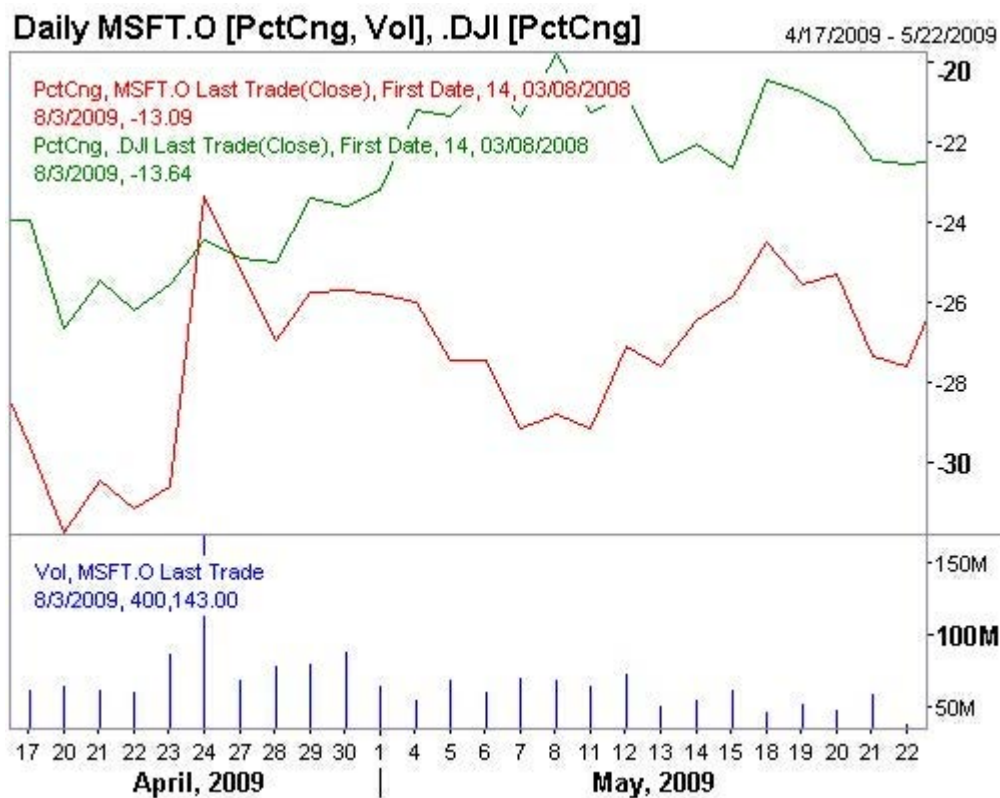
Scheme

Series, Color: Red (for TRIL.L pctcng)
 Series, Color: Blue (for .FTSE pctcng)



Series, Color: Red (for TRIL.L vol)

This gives the final series sequence 'a1', 'a3', 'a2'. You should use the Series Line/Fill controls in the same order to apply the right colors to the right lines. As a result, you will get the chart that looks like this:



In XML it will look like this:

XML Sample Request - Example 1 Making Chart with MSFT.O and .DJI

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Charts/Charts.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Charts_1/GetChart_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetChart_Request_2 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
      xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Charts_1">
      <chartRequest ImageType="PNG" Width="500" Height="400" Culture="en-US">
        <TimeSeries>
          <TimeSeriesRequest xmlns="http://metastock.com/imageserver/financial">
            <Symbol>MSFT.O</Symbol>
            <Reference>d1</Reference>
          </TimeSeriesRequest>
          <TimeSeriesRequest xmlns="http://metastock.com/imageserver/financial">
            <Symbol>.DJI</Symbol>
            <Reference>d2</Reference>
          </TimeSeriesRequest>
        </TimeSeries>
        <Analyses>
          <Analysis xmlns="http://metastock.com/imageserver/analysis">
```



```

    <Reference>a1</Reference>
  <PctCng>
    <Instrument1>
      <Reference>d1</Reference>
    </Instrument1>
  </PctCng>
</Analysis>
<Analysis xmlns="http://metastock.com/imageserver/analysis">
  <Reference>a2</Reference>
  <Vol>
    <Instrument1>
      <Reference>d1</Reference>
    </Instrument1>
  </Vol>
</Analysis>
<Analysis xmlns="http://metastock.com/imageserver/analysis">
  <Reference>a3</Reference>
  <PctCng>
    <Instrument1>
      <Reference>d2</Reference>
    </Instrument1>
  </PctCng>
</Analysis>
</Analyses>
<StandardTemplate xmlns="http://metastock.com/imageserver/financial">
  <Title>
    <Caption>
      <Visible>true</Visible>
      <Customized>>false</Customized>
    </Caption>
    <Range>
      <Visible>true</Visible>
    </Range>
  </Title>
  <Legend>
    <Visible>true</Visible>
    <Information>Long</Information>
    <Layout>MultiLine</Layout>
    <Position>Overlaid</Position>
  </Legend>
  <Instrument>Symbol</Instrument>
  <Delimiter>%</Delimiter>
  <GridLines>None</GridLines>
  <YAxisMarkers>None</YAxisMarkers>
  <YAxisTitles>None</YAxisTitles>
  <Brand>None</Brand>
  <Interval>
    <CommonType xmlns="http://metastock.com/applications/data">Days</CommonType>
    <Multiplier xmlns="http://metastock.com/applications/data">1</Multiplier>
  </Interval>
  <ShowNonTradedPeriods>>false</ShowNonTradedPeriods>
  <ShowHolidays>>false</ShowHolidays>
  <ShowGaps>true</ShowGaps>
  <XAxis>
    <Visible>true</Visible>
    <Position>Bottom</Position>
    <Range>
      <Fixed>
        <First>2009-04-17T00:00:00</First>
        <Last>2009-05-24T00:00:00</Last>
      </Fixed>
    </Range>
  </XAxis>
  <Subchart>
    <Weight>5</Weight>
    <YAxis>
      <Visible>true</Visible>
      <Position>Right</Position>
      <Invert>>false</Invert>
      <Logarithmic>>false</Logarithmic>
      <Display>
        <Mode>Automatic</Mode>
      </Display>
      <Range>
        <Automatic />

```



```

        </Range>
        <Analysis>
          <Reference>a1</Reference>
        </Analysis>
        <Analysis>
          <Reference>a3</Reference>
        </Analysis>
      </YAxis>
    </Subchart>
    <Subchart>
      <Weight>2</Weight>
      <YAxis>
        <Visible>true</Visible>
        <Position>Right</Position>
        <Invert>false</Invert>
        <Logarithmic>false</Logarithmic>
        <Display>
          <Mode>Automatic</Mode>
        </Display>
        <Range>
          <Automatic />
        </Range>
        <Analysis>
          <Reference>a2</Reference>
        </Analysis>
      </YAxis>
    </Subchart>
  </StandardTemplate>
  <Scheme xmlns="http://metastock.com/imageserver/financial">
    <Background>
      <BackgroundMode>Solid</BackgroundMode>
      <StartColor>
        <Named>White</Named>
      </StartColor>
      <EndColor>
        <Named>White</Named>
      </EndColor>
      <HatchStyle>LargeGrid</HatchStyle>
      <GradientMode>ForwardDiagonal</GradientMode>
      <ImageMode>Centered</ImageMode>
    </Background>
    <Border>
      <Color>
        <RGB>139;139;155</RGB>
      </Color>
      <DashStyle>Solid</DashStyle>
      <Width>1</Width>
    </Border>
    <GridLines>
      <Color>
        <RGB>139;139;155</RGB>
      </Color>
      <DashStyle>Dot</DashStyle>
      <Width>1</Width>
    </GridLines>
    <Title>
      <Caption>
        <Color>
          <Named>Black</Named>
        </Color>
        <Family>Arial</Family>
        <Style>Bold</Style>
        <Size>12</Size>
      </Caption>
      <Range>
        <Color>
          <Named>Black</Named>
        </Color>
        <Family>Arial</Family>
        <Style>Regular</Style>
        <Size>8.25</Size>
      </Range>
    </Title>
  </Legend>
  <Color>

```



```

        <Named>Black</Named>
    </Color>
    <Family>Arial</Family>
    <Style>Regular</Style>
    <Size>8.25</Size>
</Legend>
<XAxis>
    <Major>
        <Color>
            <Named>Black</Named>
        </Color>
        <Family>Arial</Family>
        <Style>Bold</Style>
        <Size>9.75</Size>
    </Major>
    <Minor>
        <Color>
            <Named>Black</Named>
        </Color>
        <Family>Arial</Family>
        <Style>Regular</Style>
        <Size>8.25</Size>
    </Minor>
</XAxis>
<YAxis>
    <Major>
        <Color>
            <Named>Black</Named>
        </Color>
        <Family>Arial</Family>
        <Style>Bold</Style>
        <Size>9.75</Size>
    </Major>
    <Minor>
        <Color>
            <Named>Black</Named>
        </Color>
        <Family>Arial</Family>
        <Style>Regular</Style>
        <Size>8.25</Size>
    </Minor>
    <Title>
        <Color>
            <Named>Black</Named>
        </Color>
        <Family>Arial</Family>
        <Style>Regular</Style>
        <Size>8.25</Size>
    </Title>
</YAxis>
<Series>
    <Color>
        <Named>Red</Named>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
    <FillColor>
        <Named>Black</Named>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
</Series>
<Series>
    <Color>
        <Named>Green</Named>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
    <FillColor>
        <Named>Red</Named>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
</Series>
<Series>
    <Color>
        <Named>Blue</Named>

```




```

</Color>
<DashStyle>Solid</DashStyle>
<Width>0</Width>
<FillColor>
  <RGB>62;169;0</RGB>
</FillColor>
<FillStyle>Percent20</FillStyle>
</Series>
<Series>
  <Color>
    <Named>Blue</Named>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
    <RGB>156;38;115</RGB>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<Series>
  <Color>
    <Named>Red</Named>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
    <RGB>255;120;0</RGB>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<Series>
  <Color>
    <RGB>25;108;229</RGB>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
    <RGB>25;108;229</RGB>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<Series>
  <Color>
    <RGB>60;117;28</RGB>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
    <RGB>60;117;28</RGB>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<Series>
  <Color>
    <RGB>230;176;18</RGB>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
    <RGB>230;176;18</RGB>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<Series>
  <Color>
    <RGB>0;186;193</RGB>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
    <RGB>0;186;193</RGB>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<Series>

```



```

    <Color>
      <RGB>255;178;127</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
    <FillColor>
      <RGB>255;178;127</RGB>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
  </Series>
  <Series>
    <Color>
      <RGB>100;79;190</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
    <FillColor>
      <RGB>100;79;190</RGB>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
  </Series>
  <Series>
    <Color>
      <RGB>209;36;33</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
    <FillColor>
      <RGB>209;36;33</RGB>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
  </Series>
  <Series>
    <Color>
      <RGB>38;87;135</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
    <FillColor>
      <RGB>38;87;135</RGB>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
  </Series>
  <Series>
    <Color>
      <RGB>94;176;176</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
    <FillColor>
      <RGB>94;176;176</RGB>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
  </Series>
  <LevelLine>
    <Color>
      <RGB>0;0;153</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>1</Width>
  </LevelLine>
  <LevelLine>
    <Color>
      <RGB>120;120;120</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>1</Width>
  </LevelLine>
</Scheme>
</chartRequest>
</GetChart_Request_2>

</Body>
</Envelope>

```



8.6.1.2 Example 2

If you want to plot the actual prices instead of percentage change, then you will have to create two separate Y-Axis on the first subchart, since the prices of instruments can differ very much.

Time Series

Reference: d1
Symbol: MSFT.O
Reference: d2
Symbol: .DJI

Analyses

Reference: a1
Type: Line
Instrument: d1
Reference: a2
Type: Vol
Instrument: d1
Reference: a3
Type: Line
Instrument: d2

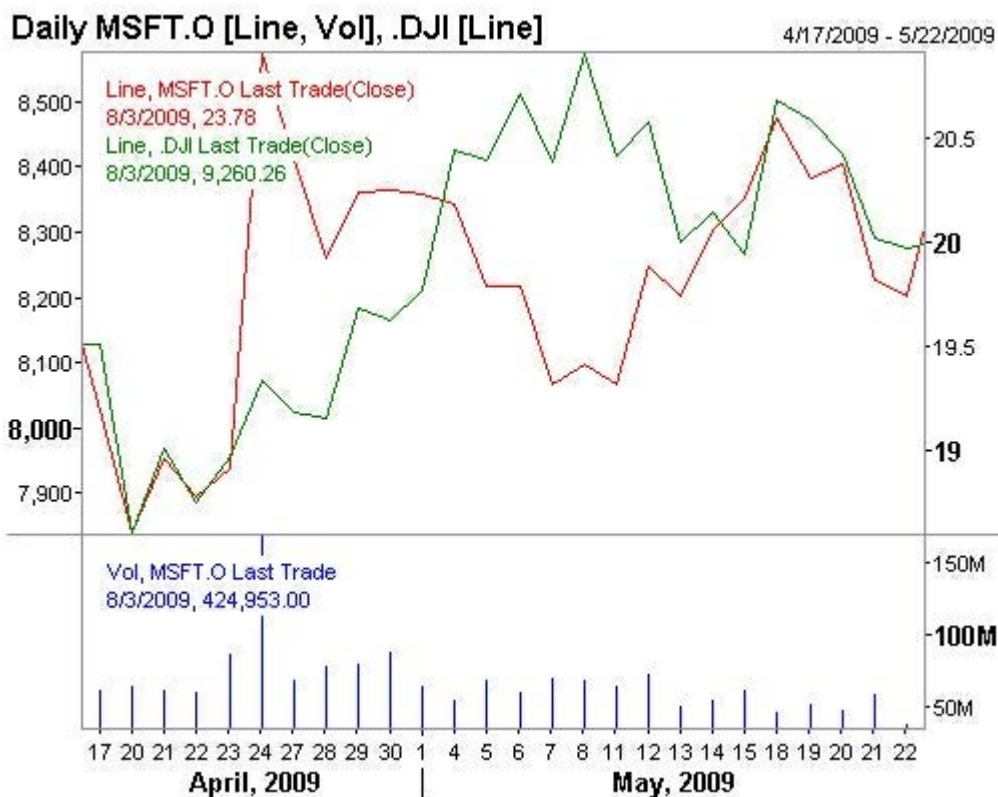
Chart

X-Axis
Subchart, Weight: 5
Y-Axis, Position: Right
Analysis 'a1'
Y-Axis, Position: Left
Analysis 'a3'
Subchart, Weight: 2
Y-Axis
Analysis 'a2'

Scheme

Series, Color: Red (for TRIL.L price)
Series, Color: Green (for .FTSE price)
Series, Color: Blue (for TRIL.L vol)

But as you can see the series sequence remains the same 'a1', 'a3', 'a2'. As a result, you will get the following chart:



The same request will look like this in XML:

XML Sample Request - Example 2 Making Chart with MSFT.O and .DJI

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Charts/Charts.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Charts_1/GetChart_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetChart_Request_2 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
      xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Charts_1">
      <chartRequest ImageType="PNG" Width="500" Height="400" Culture="en-US">
        <TimeSeries>
          <TimeSeriesRequest xmlns="http://metastock.com/imageserver/financial">
            <Symbol>MSFT.O</Symbol>
            <Reference>d1</Reference>
          </TimeSeriesRequest>
          <TimeSeriesRequest xmlns="http://metastock.com/imageserver/financial">
            <Symbol>.DJI</Symbol>
            <Reference>d2</Reference>
          </TimeSeriesRequest>
        </TimeSeries>
        <Analyses>
          <Analysis xmlns="http://metastock.com/imageserver/analysis">
            <Reference>a1</Reference>
            <Line>
              <Instrument1>
                <Reference>d1</Reference>
              </Instrument1>
            </Line>
          </Analysis>
        </Analyses>
      </chartRequest>
    </GetChart_Request_2>
  </Body>
</Envelope>
```



```

    </Line>
  </Analysis>
  <Analysis xmlns="http://metastock.com/imageserver/analysis">
    <Reference>a2</Reference>
    <Vol>
      <Instrument1>
        <Reference>d1</Reference>
      </Instrument1>
    </Vol>
  </Analysis>
  <Analysis xmlns="http://metastock.com/imageserver/analysis">
    <Reference>a3</Reference>
    <Line>
      <Instrument1>
        <Reference>d2</Reference>
      </Instrument1>
    </Line>
  </Analysis>
</Analyses>
<StandardTemplate xmlns="http://metastock.com/imageserver/financial">
  <Title>
    <Caption>
      <Visible>true</Visible>
      <Customized>>false</Customized>
    </Caption>
    <Range>
      <Visible>true</Visible>
    </Range>
  </Title>
  <Legend>
    <Visible>true</Visible>
    <Information>Long</Information>
    <Layout>MultiLine</Layout>
    <Position>Overlaid</Position>
  </Legend>
  <Instrument>Symbol</Instrument>
  <Delimiter>%</Delimiter>
  <GridLines>None</GridLines>
  <YAxisMarkers>None</YAxisMarkers>
  <YAxisTitles>None</YAxisTitles>
  <Brand>None</Brand>
  <Interval>
    <CommonType xmlns="http://metastock.com/applications/data">Days</CommonType>
    <Multiplier xmlns="http://metastock.com/applications/data">1</Multiplier>
  </Interval>
  <ShowNonTradedPeriods>>false</ShowNonTradedPeriods>
  <ShowHolidays>>false</ShowHolidays>
  <ShowGaps>true</ShowGaps>
  <XAxis>
    <Visible>true</Visible>
    <Position>Bottom</Position>
    <Range>
      <Fixed>
        <First>2009-04-17T00:00:00</First>
        <Last>2009-05-24T00:00:00</Last>
      </Fixed>
    </Range>
  </XAxis>
  <Subchart>
    <Weight>5</Weight>
    <YAxis>
      <Visible>true</Visible>
      <Position>Right</Position>
      <Invert>>false</Invert>
      <Logarithmic>>false</Logarithmic>
      <Display>
        <Mode>Automatic</Mode>
      </Display>
      <Range>
        <Automatic />
      </Range>
      <Analysis>
        <Reference>a1</Reference>
      </Analysis>
    </YAxis>
  </Subchart>

```



```

    <YAxis>
      <Visible>true</Visible>
      <Position>Left</Position>
      <Invert>false</Invert>
      <Logarithmic>false</Logarithmic>
      <Display>
        <Mode>Automatic</Mode>
      </Display>
      <Range>
        <Automatic />
      </Range>
      <Analysis>
        <Reference>a3</Reference>
      </Analysis>
    </YAxis>
  </Subchart>
<Subchart>
  <Weight>2</Weight>
  <YAxis>
    <Visible>true</Visible>
    <Position>Right</Position>
    <Invert>false</Invert>
    <Logarithmic>false</Logarithmic>
    <Display>
      <Mode>Automatic</Mode>
    </Display>
    <Range>
      <Automatic />
    </Range>
    <Analysis>
      <Reference>a2</Reference>
    </Analysis>
  </YAxis>
</Subchart>
</StandardTemplate>
<Scheme xmlns="http://metastock.com/imageserver/financial">
  <Background>
    <BackgroundMode>Solid</BackgroundMode>
    <StartColor>
      <Named>White</Named>
    </StartColor>
    <EndColor>
      <Named>White</Named>
    </EndColor>
    <HatchStyle>LargeGrid</HatchStyle>
    <GradientMode>ForwardDiagonal</GradientMode>
    <ImageMode>Centered</ImageMode>
  </Background>
  <Border>
    <Color>
      <RGB>139;139;155</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>1</Width>
  </Border>
  <GridLines>
    <Color>
      <RGB>139;139;155</RGB>
    </Color>
    <DashStyle>Dot</DashStyle>
    <Width>1</Width>
  </GridLines>
  <Title>
    <Caption>
      <Color>
        <Named>Black</Named>
      </Color>
      <Family>Arial</Family>
      <Style>Bold</Style>
      <Size>12</Size>
    </Caption>
    <Range>
      <Color>
        <Named>Black</Named>
      </Color>

```



```

    <Family>Arial</Family>
    <Style>Regular</Style>
    <Size>8.25</Size>
  </Range>
</Title>
<Legend>
  <Color>
    <Named>Black</Named>
  </Color>
  <Family>Arial</Family>
  <Style>Regular</Style>
  <Size>8.25</Size>
</Legend>
<XAxis>
  <Major>
    <Color>
      <Named>Black</Named>
    </Color>
    <Family>Arial</Family>
    <Style>Bold</Style>
    <Size>9.75</Size>
  </Major>
  <Minor>
    <Color>
      <Named>Black</Named>
    </Color>
    <Family>Arial</Family>
    <Style>Regular</Style>
    <Size>8.25</Size>
  </Minor>
</XAxis>
<YAxis>
  <Major>
    <Color>
      <Named>Black</Named>
    </Color>
    <Family>Arial</Family>
    <Style>Bold</Style>
    <Size>9.75</Size>
  </Major>
  <Minor>
    <Color>
      <Named>Black</Named>
    </Color>
    <Family>Arial</Family>
    <Style>Regular</Style>
    <Size>8.25</Size>
  </Minor>
  <Title>
    <Color>
      <Named>Black</Named>
    </Color>
    <Family>Arial</Family>
    <Style>Regular</Style>
    <Size>8.25</Size>
  </Title>
</YAxis>
<Series>
  <Color>
    <Named>Red</Named>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
    <Named>Black</Named>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<Series>
  <Color>
    <Named>Green</Named>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>

```



```

    <Named>Red</Named>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<Series>
  <Color>
    <Named>Blue</Named>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
    <RGB>62;169;0</RGB>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<Series>
  <Color>
    <Named>Blue</Named>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
    <RGB>156;38;115</RGB>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<Series>
  <Color>
    <Named>Red</Named>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
    <RGB>255;120;0</RGB>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<Series>
  <Color>
    <RGB>25;108;229</RGB>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
    <RGB>25;108;229</RGB>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<Series>
  <Color>
    <RGB>60;117;28</RGB>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
    <RGB>60;117;28</RGB>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<Series>
  <Color>
    <RGB>230;176;18</RGB>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
    <RGB>230;176;18</RGB>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<Series>
  <Color>
    <RGB>0;186;193</RGB>
  </Color>
  <DashStyle>Solid</DashStyle>

```




```

    <Width>0</Width>
    <FillColor>
      <RGB>0;186;193</RGB>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
  </Series>
  <Series>
    <Color>
      <RGB>255;178;127</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
    <FillColor>
      <RGB>255;178;127</RGB>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
  </Series>
  <Series>
    <Color>
      <RGB>100;79;190</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
    <FillColor>
      <RGB>100;79;190</RGB>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
  </Series>
  <Series>
    <Color>
      <RGB>209;36;33</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
    <FillColor>
      <RGB>209;36;33</RGB>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
  </Series>
  <Series>
    <Color>
      <RGB>38;87;135</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
    <FillColor>
      <RGB>38;87;135</RGB>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
  </Series>
  <Series>
    <Color>
      <RGB>94;176;176</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
    <FillColor>
      <RGB>94;176;176</RGB>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
  </Series>
  <LevelLine>
    <Color>
      <RGB>0;0;153</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>1</Width>
  </LevelLine>
  <LevelLine>
    <Color>
      <RGB>120;120;120</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>1</Width>
  </LevelLine>

```



```

</Scheme>
</chartRequest>
</GetChart_Request_2>

</Body>
</Envelope>

```

8.6.1.3 Example 3

Let's take Bollinger Bands analysis as another more complex example. To plot it along with instrument's OHLC and volume we need one data fetch and three analyses:

Time Series

Reference: d1
Symbol: MSFT.O

Analyses

Reference: a1
Type: OHLC
Instrument: d1

Reference: a2
Type: Vol
Instrument: d1

Reference: a3
Type: BBand
Instrument: d1

Chart

X-Axis
Subchart, Weight: 5
Y-Axis
Analysis 'a1'
Analysis 'a3'

Subchart, Weight: 2
Y-Axis
Analysis 'a2'

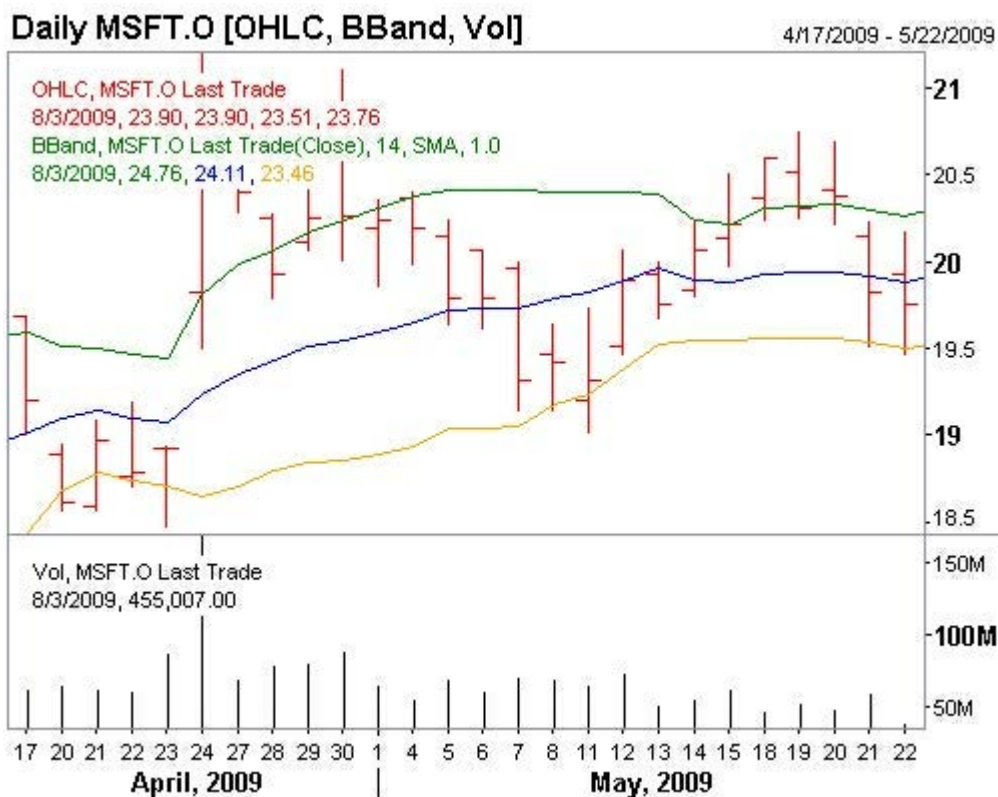
Scheme

Series, Color: Red (for price)
Series, Color: Green (for BBand upper line)
Series, Color: Blue (for BBand centre line)
Series, Color: Orange (for BBand lower line)
Series, Color: Black (for vol)

Since the BBand analysis consists of three series, the resulting sequence will be: 'a1', 'a3'/1, 'a3'/2, 'a3'/3, 'a2'.

That means you will have to configure 5 styles of series styles in the corresponding order.

The result of the request we created in this example will look like this:



The same request will look like this in XML:

XML Sample Request - Example 3 Making Chart with MSFT.O and .DJI

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Charts/Charts.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Charts_1/GetChart_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetChart_Request_2 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
      xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Charts_1">
      <chartRequest ImageType="PNG" Width="500" Height="400" Culture="en-US">
        <TimeSeries>
          <TimeSeriesRequest xmlns="http://metastock.com/imageserver/financial">
            <Symbol>MSFT.O</Symbol>
            <Reference>d1</Reference>
          </TimeSeriesRequest>
        </TimeSeries>
        <Analyses>
          <Analysis xmlns="http://metastock.com/imageserver/analysis">
            <Reference>a1</Reference>
            <OHLC>
              <Instrument1>
                <Reference>d1</Reference>
              </Instrument1>
            </OHLC>
          </Analysis>
          <Analysis xmlns="http://metastock.com/imageserver/analysis">
            <Reference>a2</Reference>
          </Analysis>
        </Analyses>
      </chartRequest>
    </GetChart_Request_2>
  </Body>
</Envelope>
```



```

    <Vol>
      <Instrument1>
        <Reference>d1</Reference>
      </Instrument1>
    </Vol>
  </Analysis>
<Analysis xmlns="http://metastock.com/imageserver/analysis">
  <Reference>a3</Reference>
  <BBand>
    <Instrument1>
      <Reference>d1</Reference>
    </Instrument1>
  </BBand>
</Analysis>
</Analyses>
<StandardTemplate xmlns="http://metastock.com/imageserver/financial">
  <Title>
    <Caption>
      <Visible>true</Visible>
      <Customized>>false</Customized>
    </Caption>
    <Range>
      <Visible>true</Visible>
    </Range>
  </Title>
  <Legend>
    <Visible>true</Visible>
    <Information>Long</Information>
    <Layout>MultiLine</Layout>
    <Position>Overlaid</Position>
  </Legend>
  <Instrument>Symbol</Instrument>
  <Delimiter>%</Delimiter>
  <GridLines>None</GridLines>
  <YAxisMarkers>None</YAxisMarkers>
  <YAxisTitles>None</YAxisTitles>
  <Brand>None</Brand>
  <Interval>
    <CommonType xmlns="http://metastock.com/applications/data">Days</CommonType>
    <Multiplier xmlns="http://metastock.com/applications/data">1</Multiplier>
  </Interval>
  <ShowNonTradedPeriods>>false</ShowNonTradedPeriods>
  <ShowHolidays>>false</ShowHolidays>
  <ShowGaps>true</ShowGaps>
  <XAxis>
    <Visible>true</Visible>
    <Position>Bottom</Position>
    <Range>
      <Fixed>
        <First>2009-04-17T00:00:00</First>
        <Last>2009-05-24T00:00:00</Last>
      </Fixed>
    </Range>
  </XAxis>
  <Subchart>
    <Weight>5</Weight>
    <YAxis>
      <Visible>true</Visible>
      <Position>Right</Position>
      <Invert>>false</Invert>
      <Logarithmic>>false</Logarithmic>
      <Display>
        <Mode>Automatic</Mode>
      </Display>
      <Range>
        <Automatic />
      </Range>
      <Analysis>
        <Reference>a1</Reference>
      </Analysis>
      <Analysis>
        <Reference>a3</Reference>
      </Analysis>
    </YAxis>
  </Subchart>

```



```

<Subchart>
  <Weight>2</Weight>
  <YAxis>
    <Visible>true</Visible>
    <Position>Right</Position>
    <Invert>false</Invert>
    <Logarithmic>false</Logarithmic>
    <Display>
      <Mode>Automatic</Mode>
    </Display>
    <Range>
      <Automatic />
    </Range>
    <Analysis>
      <Reference>a2</Reference>
    </Analysis>
  </YAxis>
</Subchart>
</StandardTemplate>
<Scheme xmlns="http://metastock.com/imageserver/financial">
  <Background>
    <BackgroundMode>Solid</BackgroundMode>
    <StartColor>
      <Named>White</Named>
    </StartColor>
    <EndColor>
      <Named>White</Named>
    </EndColor>
    <HatchStyle>LargeGrid</HatchStyle>
    <GradientMode>ForwardDiagonal</GradientMode>
    <ImageMode>Centered</ImageMode>
  </Background>
  <Border>
    <Color>
      <RGB>139;139;155</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>1</Width>
  </Border>
  <GridLines>
    <Color>
      <RGB>139;139;155</RGB>
    </Color>
    <DashStyle>Dot</DashStyle>
    <Width>1</Width>
  </GridLines>
  <Title>
    <Caption>
      <Color>
        <Named>Black</Named>
      </Color>
      <Family>Arial</Family>
      <Style>Bold</Style>
      <Size>12</Size>
    </Caption>
    <Range>
      <Color>
        <Named>Black</Named>
      </Color>
      <Family>Arial</Family>
      <Style>Regular</Style>
      <Size>8.25</Size>
    </Range>
  </Title>
  <Legend>
    <Color>
      <Named>Black</Named>
    </Color>
    <Family>Arial</Family>
    <Style>Regular</Style>
    <Size>8.25</Size>
  </Legend>
  <XAxis>
    <Major>
      <Color>

```



```

        <Named>Black</Named>
    </Color>
    <Family>Arial</Family>
    <Style>Bold</Style>
    <Size>9.75</Size>
</Major>
<Minor>
    <Color>
        <Named>Black</Named>
    </Color>
    <Family>Arial</Family>
    <Style>Regular</Style>
    <Size>8.25</Size>
</Minor>
</XAxis>
<YAxis>
    <Major>
        <Color>
            <Named>Black</Named>
        </Color>
        <Family>Arial</Family>
        <Style>Bold</Style>
        <Size>9.75</Size>
    </Major>
    <Minor>
        <Color>
            <Named>Black</Named>
        </Color>
        <Family>Arial</Family>
        <Style>Regular</Style>
        <Size>8.25</Size>
    </Minor>
    <Title>
        <Color>
            <Named>Black</Named>
        </Color>
        <Family>Arial</Family>
        <Style>Regular</Style>
        <Size>8.25</Size>
    </Title>
</YAxis>
<Series>
    <Color>
        <Named>Red</Named>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
    <FillColor>
        <Named>Black</Named>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
</Series>
<Series>
    <Color>
        <Named>Green</Named>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
    <FillColor>
        <Named>Red</Named>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
</Series>
<Series>
    <Color>
        <Named>Blue</Named>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
    <FillColor>
        <RGB>62;169;0</RGB>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
</Series>
<Series>

```



```

    <Color>
      <Named>Orange</Named>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
    <FillColor>
      <RGB>156;38;115</RGB>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
  </Series>
</Series>
<Series>
  <Color>
    <Named>Black</Named>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
    <RGB>255;120;0</RGB>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<Series>
  <Color>
    <RGB>25;108;229</RGB>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
    <RGB>25;108;229</RGB>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<Series>
  <Color>
    <RGB>60;117;28</RGB>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
    <RGB>60;117;28</RGB>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<Series>
  <Color>
    <RGB>230;176;18</RGB>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
    <RGB>230;176;18</RGB>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<Series>
  <Color>
    <RGB>0;186;193</RGB>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
    <RGB>0;186;193</RGB>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<Series>
  <Color>
    <RGB>255;178;127</RGB>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
    <RGB>255;178;127</RGB>
  </FillColor>
  <FillStyle>Percent20</FillStyle>

```



```

</Series>
<Series>
  <Color>
    <RGB>100;79;190</RGB>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
    <RGB>100;79;190</RGB>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<Series>
  <Color>
    <RGB>209;36;33</RGB>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
    <RGB>209;36;33</RGB>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<Series>
  <Color>
    <RGB>38;87;135</RGB>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
    <RGB>38;87;135</RGB>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<Series>
  <Color>
    <RGB>94;176;176</RGB>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
    <RGB>94;176;176</RGB>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<LevelLine>
  <Color>
    <RGB>0;0;153</RGB>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>1</Width>
</LevelLine>
<LevelLine>
  <Color>
    <RGB>120;120;120</RGB>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>1</Width>
</LevelLine>
</Scheme>
</chartRequest>
</GetChart_Request_2>
</Body>
</Envelope>

```

8.6.1.4 Creating Chart For The Past 10 Years

The Charts web service is configured to return only 1000 data points.

If you need to create a chart for the past 10 years you will need to specify an exact data range:



XML Sample Request

```

<TimeSeries>
  <TimeSeriesRequest xmlns="http://metastock.com/imageserver/financial">
    <Symbol>9501.T</Symbol>
    <Reference>d1</Reference>
    <RequestRange>
      <StartDate xmlns="http://metastock.com/applications/data">2000-09-16T00:00:00</StartDate>
      <EndDate xmlns="http://metastock.com/applications/data">2010-09-16T00:00:00</EndDate>
    </RequestRange>
  </TimeSeriesRequest>
  <TimeSeriesRequest xmlns="http://metastock.com/imageserver/financial">
    <Symbol>VOD.L</Symbol>
    <Reference>d2</Reference>
  </TimeSeriesRequest>
</TimeSeries>

```

rather than:

XML Sample Request

```

<XAxis>
  <Visible>true</Visible>
  <Position>Bottom</Position>
  <Range>
    <Last>
      <Type>Year</Type>
      <Count>10</Count>
      <Display>All</Display>
    </Last>
  </Range>
</XAxis>

```

8.6.2 Customizing Chart Appearance

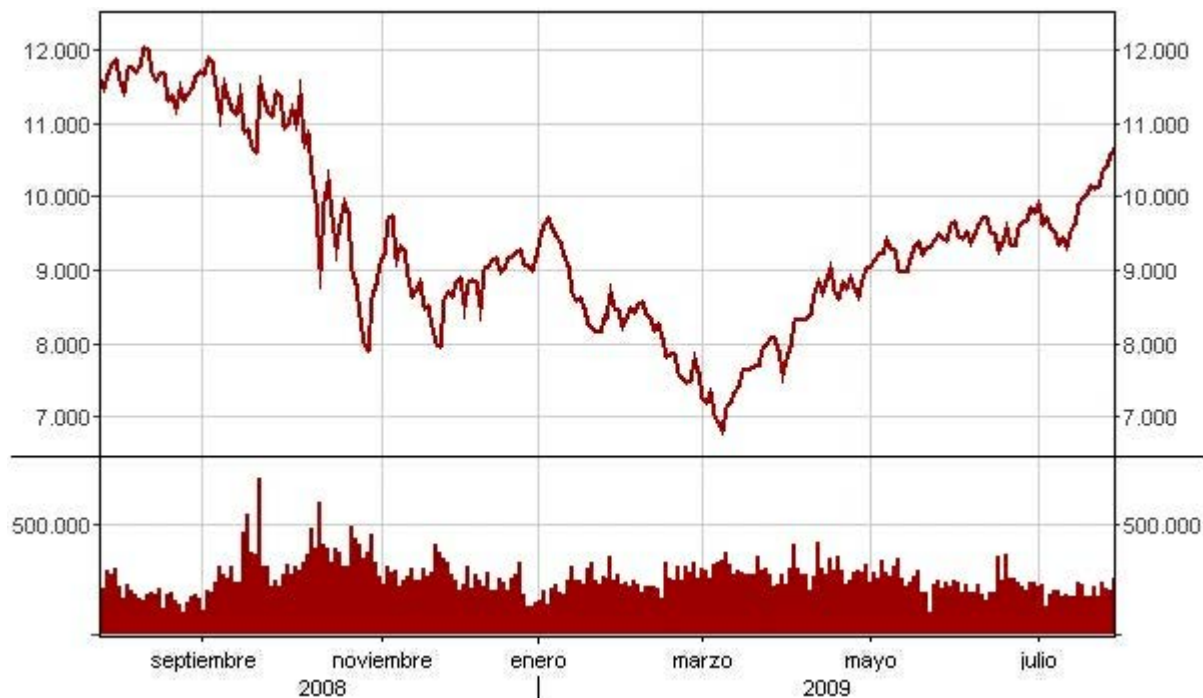
There are two main ways to ensure that charts match your company's corporate brand identity, which will be described one by one later in this section:

1. Using the colour that data points are plotted in to match a colour used in your brand identity, as illustrated in case 1 below.
2. Using a background gradient to match a colour used in your brand identity, as illustrated in case 2 below

You can also choose the font used for text on charts.

8.6.2.1 Customizing Colour for Data Series





This can be implemented by configuring the colour for the appropriate data series as described below. To understand how data series are related to the lines on the chart please go to section Making Chart Request earlier in this chapter.

Note: The chart above shows daily statistics for IBEX 35 INDEX.

The same request will look like this in XML:

XML Sample Request Customizing Colour for Data Series

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/2006/05/01/Charts.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Charts_1/GetChart_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetChart_Request_2 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
      xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Charts_1">
      <chartRequest ImageType="PNG" Width="600" Height="350" Title="IBEX 35" Culture="es-ES">
        <TimeSeries>
          <TimeSeriesRequest xmlns="http://metastock.com/imageserver/financial">
            <Symbol>.IBEX</Symbol>
            <Reference>d1</Reference>
          </TimeSeriesRequest>
        </TimeSeries>
        <Analyses>
          <Analysis xmlns="http://metastock.com/imageserver/analysis">
            <Reference>a1</Reference>
            <Line>
              <Instrument1>
                <Reference>d1</Reference>
              </Instrument1>
            </Line>
          </Analysis>
        </Analyses>
      </chartRequest>
    </GetChart_Request_2>
  </Body>
</Envelope>
```



```

    <Reference>a2</Reference>
  <Vol>
    <Instrument1>
      <Reference>d1</Reference>
    </Instrument1>
  </Vol>
</Analysis>
</Analyses>
<StandardTemplate xmlns="http://metastock.com/imageserver/financial">
  <Title>
    <Caption>
      <Visible>>false</Visible>
      <Customized>>false</Customized>
    </Caption>
    <Range>
      <Visible>>false</Visible>
    </Range>
  </Title>
  <Legend>
    <Visible>>false</Visible>
    <Information>Long</Information>
    <Layout>MultiLine</Layout>
    <Position>Overlaid</Position>
  </Legend>
  <Instrument>Symbol</Instrument>
  <Delimiter>%</Delimiter>
  <GridLines>Both</GridLines>
  <YAxisMarkers>None</YAxisMarkers>
  <YAxisTitles>Unit</YAxisTitles>
  <Brand>None</Brand>
  <Interval>
    <CommonType xmlns="http://metastock.com/applications/data">Days</CommonType>
    <Multiplier xmlns="http://metastock.com/applications/data">1</Multiplier>
  </Interval>
  <ShowNonTradedPeriods>>false</ShowNonTradedPeriods>
  <ShowHolidays>>false</ShowHolidays>
  <ShowGaps>true</ShowGaps>
  <XAxis>
    <Visible>true</Visible>
    <Position>Bottom</Position>
    <Range>
      <Fixed>
        <First>2008-07-27T00:00:00</First>
        <Last>2009-07-27T00:00:00</Last>
      </Fixed>
    </Range>
  </XAxis>
  <Subchart>
    <Weight>5</Weight>
    <YAxis>
      <Visible>true</Visible>
      <Position>Right</Position>
      <Invert>>false</Invert>
      <Logarithmic>>false</Logarithmic>
      <Display>
        <Mode>Automatic</Mode>
      </Display>
      <Range>
        <Fixed>
          <First>6500</First>
          <Last>12500</Last>
        </Fixed>
      </Range>
    </YAxis>
    <Analysis>
      <Reference>a1</Reference>
    </Analysis>
  </Subchart>
  <YAxis>
    <Visible>true</Visible>
    <Position>Left</Position>
    <Invert>>false</Invert>
    <Logarithmic>>false</Logarithmic>
    <Display>
      <Mode>Automatic</Mode>
    </Display>
  </YAxis>

```



```

    <Range>
      <Fixed>
        <First>6500</First>
        <Last>12500</Last>
      </Fixed>
    </Range>
  </YAxis>
</Subchart>
<Subchart>
  <Weight>2</Weight>
  <YAxis>
    <Visible>true</Visible>
    <Position>Right</Position>
    <Invert>false</Invert>
    <Logarithmic>false</Logarithmic>
    <Display>
      <Mode>Automatic</Mode>
    </Display>
    <Range>
      <Fixed>
        <First>0</First>
        <Last>800000</Last>
      </Fixed>
    </Range>
    <Analysis>
      <Reference>a2</Reference>
    </Analysis>
  </YAxis>
  <YAxis>
    <Visible>true</Visible>
    <Position>Left</Position>
    <Invert>false</Invert>
    <Logarithmic>false</Logarithmic>
    <Display>
      <Mode>Automatic</Mode>
    </Display>
    <Range>
      <Fixed>
        <First>0</First>
        <Last>800000</Last>
      </Fixed>
    </Range>
  </YAxis>
</Subchart>
</StandardTemplate>
<Scheme xmlns="http://metastock.com/imageserver/financial">
  <Background>
    <BackgroundMode>Solid</BackgroundMode>
    <StartColor>
      <Named>White</Named>
    </StartColor>
    <EndColor>
      <Named>White</Named>
    </EndColor>
    <HatchStyle>LargeGrid</HatchStyle>
    <GradientMode>ForwardDiagonal</GradientMode>
    <ImageMode>Centered</ImageMode>
  </Background>
  <Border>
    <Color>
      <Named>Black</Named>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>1</Width>
  </Border>
  <GridLines>
    <Color>
      <RGB>204;204;204</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>1</Width>
  </GridLines>
  <Title>
    <Caption>
      <Color>

```



```

        <Named>Black</Named>
    </Color>
    <Family>Arial</Family>
    <Style>Bold</Style>
    <Size>12</Size>
</Caption>
<Range>
    <Color>
        <Named>Black</Named>
    </Color>
    <Family>Arial</Family>
    <Style>Regular</Style>
    <Size>8.25</Size>
</Range>
</Title>
<Legend>
    <Color>
        <Named>Black</Named>
    </Color>
    <Family>Arial</Family>
    <Style>Regular</Style>
    <Size>8.25</Size>
</Legend>
<XAxis>
    <Major>
        <Color>
            <Named>Black</Named>
        </Color>
        <Family>Arial</Family>
        <Style>Regular</Style>
        <Size>8.25</Size>
    </Major>
    <Minor>
        <Color>
            <Named>Black</Named>
        </Color>
        <Family>Arial</Family>
        <Style>Regular</Style>
        <Size>8.25</Size>
    </Minor>
</XAxis>
<YAxis>
    <Major>
        <Color>
            <RGB>68;66;67</RGB>
        </Color>
        <Family>Arial</Family>
        <Style>Regular</Style>
        <Size>8.25</Size>
    </Major>
    <Minor>
        <Color>
            <RGB>68;66;67</RGB>
        </Color>
        <Family>Arial</Family>
        <Style>Regular</Style>
        <Size>8.25</Size>
    </Minor>
    <Title>
        <Color>
            <RGB>68;66;67</RGB>
        </Color>
        <Family>Arial</Family>
        <Style>Regular</Style>
        <Size>8.25</Size>
    </Title>
</YAxis>
<Series>
    <Color>
        <RGB>153;0;0</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>2</Width>
    <FillColor>
        <Named>Black</Named>

```



```

    </FillColor>
    <FillStyle>Percent20</FillStyle>
  </Series>
  <Series>
    <Color>
      <RGB>153;0;0</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>2</Width>
    <FillColor>
      <Named>Red</Named>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
  </Series>
  <Series>
    <Color>
      <Named>Black</Named>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
    <FillColor>
      <RGB>62;169;0</RGB>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
  </Series>
  <Series>
    <Color>
      <Named>Black</Named>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
    <FillColor>
      <RGB>156;38;115</RGB>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
  </Series>
  <Series>
    <Color>
      <RGB>255;120;0</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
    <FillColor>
      <RGB>255;120;0</RGB>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
  </Series>
  <Series>
    <Color>
      <RGB>25;108;229</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
    <FillColor>
      <RGB>25;108;229</RGB>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
  </Series>
  <Series>
    <Color>
      <RGB>60;117;28</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
    <FillColor>
      <RGB>60;117;28</RGB>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
  </Series>
  <Series>
    <Color>
      <RGB>230;176;18</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>

```



```

    <FillColor>
      <RGB>230;176;18</RGB>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
  </Series>
  <Series>
    <Color>
      <RGB>0;186;193</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
    <FillColor>
      <RGB>0;186;193</RGB>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
  </Series>
  <Series>
    <Color>
      <RGB>255;178;127</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
    <FillColor>
      <RGB>255;178;127</RGB>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
  </Series>
  <Series>
    <Color>
      <RGB>100;79;190</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
    <FillColor>
      <RGB>100;79;190</RGB>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
  </Series>
  <Series>
    <Color>
      <RGB>209;36;33</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
    <FillColor>
      <RGB>209;36;33</RGB>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
  </Series>
  <Series>
    <Color>
      <RGB>38;87;135</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
    <FillColor>
      <RGB>38;87;135</RGB>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
  </Series>
  <Series>
    <Color>
      <RGB>94;176;176</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
    <FillColor>
      <RGB>94;176;176</RGB>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
  </Series>
  <LevelLine>
    <Color>
      <RGB>0;0;153</RGB>
    </Color>

```



```

    <DashStyle>Solid</DashStyle>
    <Width>1</Width>
  </LevelLine>
  <LevelLine>
    <Color>
      <RGB>120;120;120</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>1</Width>
  </LevelLine>
</Scheme>
</chartRequest>
</GetChart_Request_2>

</Body>
</Envelope>

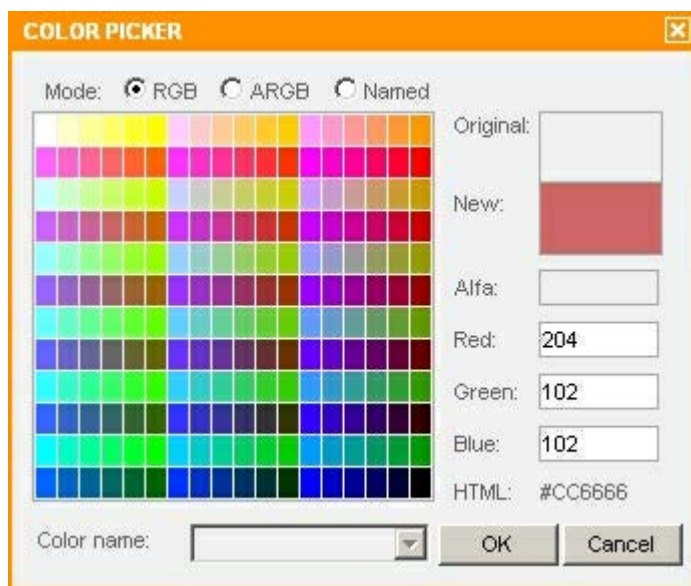
```

8.6.2.1.1 Colour Picker

This section describes the colour picker tool available in Request builder. It can be used for changing colours used for drawing charts.

8.6.2.1.1.1 RGB Mode

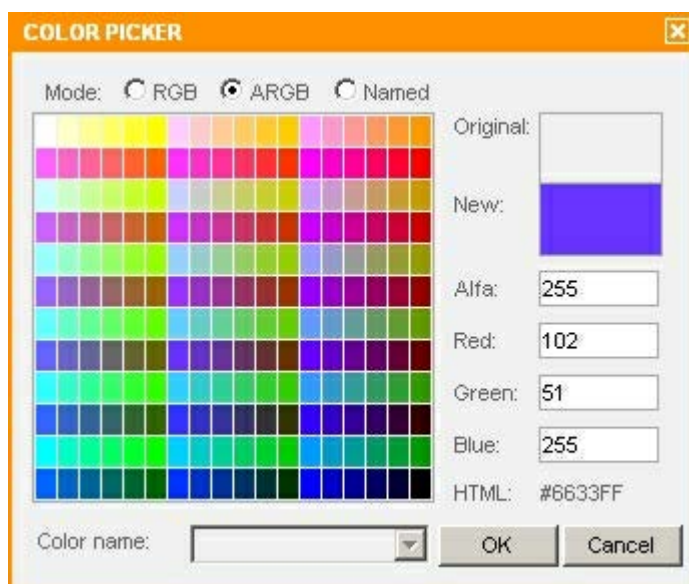
You can either choose a colour from the palette or enter Red, Green, Blue component values manually to get the exact color you need:



8.6.2.1.1.2 ARGB Mode

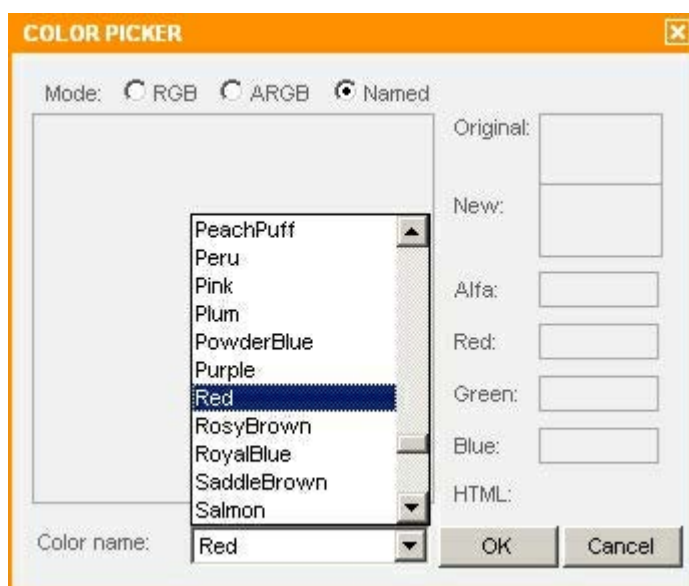
You can either choose a color from the palette or enter Red, Green, Blue values manually to get the exact colour you need. Additionally, you can set the value for Alpha level -transparency:



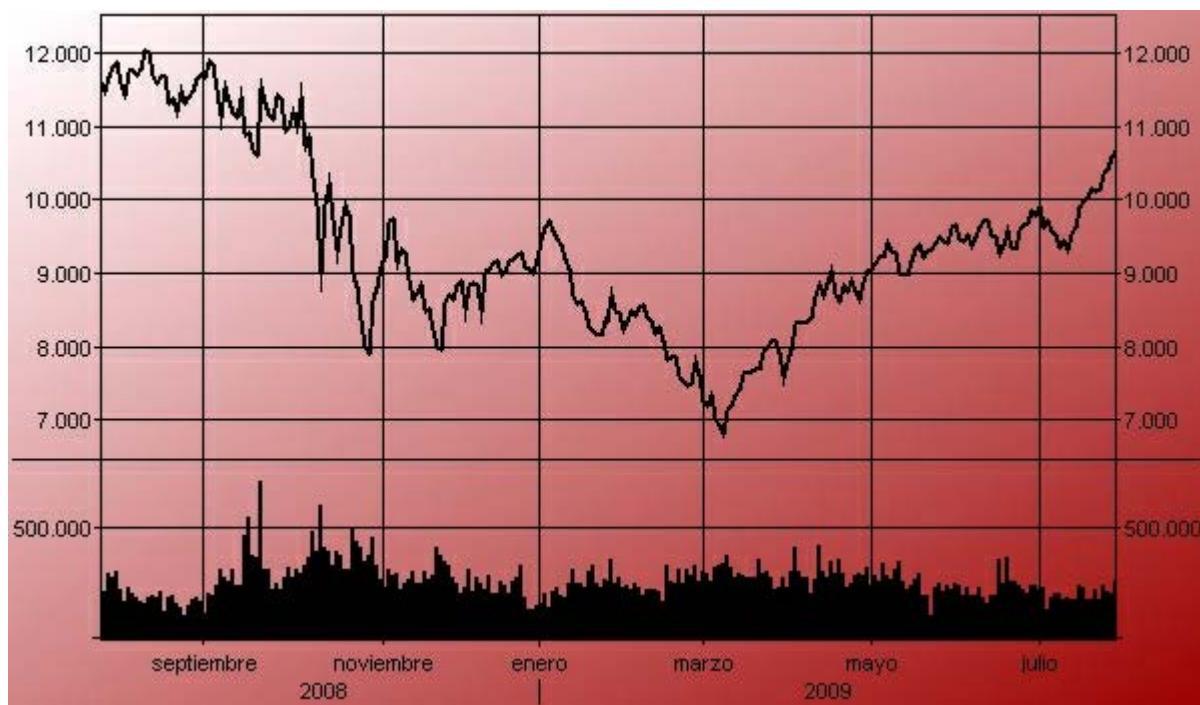


8.6.2.1.1.3 Named Mode

Use this mode to select commonly used named colors - for example, Red, Cyan, Blue, etc.



8.6.2.2 Customizing Background Colour



Note: The chart above shows daily statistics for IBEX 35 INDEX.

This can be implemented by configuring the background as described below:

1. Set Background mode to Gradient 2
2. Set Gradient Mode to Forward Diagonal
3. Set Start Color to White
4. Set End Color to RGB 153;0;0

You should get the following form:

Background

Mode*:	Gradient	
Gradient Mode*:	Forward Diagonal	
Start Color*:	White	
End Color*:	153;0;0	

Other gradient modes available:

- Horizontal
- Vertical
- Forward Diagonal
- Backward Diagonal
- Horizontal Cycle
- Vertical Cycle
- Forward Diagonal Cycle
- Backward Diagonal Cycle

The request for the chart shown above will be the following in XML:



XML Sample Request - Customizing Background Colour

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/2006/05/01/Charts.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Charts_1/GetChart_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetChart_Request_2 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
      xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Charts_1">
      <chartRequest ImageType="PNG" Width="600" Height="350" Title="IBEX 35" Culture="es-ES">
        <TimeSeries>
          <TimeSeriesRequest xmlns="http://metastock.com/imageserver/financial">
            <Symbol>.IBEX</Symbol>
            <Reference>d1</Reference>
          </TimeSeriesRequest>
        </TimeSeries>
        <Analyses>
          <Analysis xmlns="http://metastock.com/imageserver/analysis">
            <Reference>a1</Reference>
            <Line>
              <Instrument1>
                <Reference>d1</Reference>
              </Instrument1>
            </Line>
          </Analysis>
          <Analysis xmlns="http://metastock.com/imageserver/analysis">
            <Reference>a2</Reference>
            <Vol>
              <Instrument1>
                <Reference>d1</Reference>
              </Instrument1>
            </Vol>
          </Analysis>
        </Analyses>
        <StandardTemplate xmlns="http://metastock.com/imageserver/financial">
          <Title>
            <Caption>
              <Visible>>false</Visible>
              <Customized>>false</Customized>
            </Caption>
            <Range>
              <Visible>>false</Visible>
            </Range>
          </Title>
          <Legend>
            <Visible>>false</Visible>
            <Information>Long</Information>
            <Layout>MultiLine</Layout>
            <Position>Overlaid</Position>
          </Legend>
          <Instrument>Symbol</Instrument>
          <Delimiter>%</Delimiter>
          <GridLines>Both</GridLines>
          <YAxisMarkers>None</YAxisMarkers>
          <YAxisTitles>Unit</YAxisTitles>
          <Brand>None</Brand>
          <Interval>
            <CommonType xmlns="http://metastock.com/applications/data">Days</CommonType>
            <Multiplier xmlns="http://metastock.com/applications/data">1</Multiplier>
          </Interval>
          <ShowNonTradedPeriods>>false</ShowNonTradedPeriods>
          <ShowHolidays>>false</ShowHolidays>
          <ShowGaps>true</ShowGaps>
        </StandardTemplate>
      </chartRequest>
    </Body>
  </Envelope>

```



```

    <Range>
      <Fixed>
        <First>2008-07-27T00:00:00</First>
        <Last>2009-07-27T00:00:00</Last>
      </Fixed>
    </Range>
  </XAxis>
</Subchart>
<Subchart>
  <Weight>5</Weight>
  <YAxis>
    <Visible>true</Visible>
    <Position>Right</Position>
    <Invert>false</Invert>
    <Logarithmic>false</Logarithmic>
    <Display>
      <Mode>Automatic</Mode>
    </Display>
    <Range>
      <Fixed>
        <First>6500</First>
        <Last>12500</Last>
      </Fixed>
    </Range>
    <Analysis>
      <Reference>a1</Reference>
    </Analysis>
  </YAxis>
</Subchart>
<Subchart>
  <Weight>2</Weight>
  <YAxis>
    <Visible>true</Visible>
    <Position>Right</Position>
    <Invert>false</Invert>
    <Logarithmic>false</Logarithmic>
    <Display>
      <Mode>Automatic</Mode>
    </Display>
    <Range>
      <Fixed>
        <First>0</First>
        <Last>800000</Last>
      </Fixed>
    </Range>
    <Analysis>
      <Reference>a2</Reference>
    </Analysis>
  </YAxis>
</Subchart>
<Subchart>
  <Weight>2</Weight>
  <YAxis>
    <Visible>true</Visible>
    <Position>Left</Position>
    <Invert>false</Invert>
    <Logarithmic>false</Logarithmic>
    <Display>
      <Mode>Automatic</Mode>
    </Display>
    <Range>
      <Fixed>
        <First>0</First>
        <Last>800000</Last>
      </Fixed>
    </Range>
    <Analysis>
      <Reference>a2</Reference>
    </Analysis>
  </YAxis>
</Subchart>

```



```

        </Fixed>
    </Range>
</YAxis>
</Subchart>
</StandardTemplate>
<Scheme xmlns="http://metastock.com/imageserver/financial">
    <Background>
        <BackgroundMode>Gradient</BackgroundMode>
        <StartColor>
            <Named>White</Named>
        </StartColor>
        <EndColor>
            <RGB>153;0;0</RGB>
        </EndColor>
        <HatchStyle>LargeGrid</HatchStyle>
        <GradientMode>ForwardDiagonal</GradientMode>
        <ImageMode>Centered</ImageMode>
    </Background>
    <Border>
        <Color>
            <Named>Black</Named>
        </Color>
        <DashStyle>Solid</DashStyle>
        <Width>1</Width>
    </Border>
    <GridLines>
        <Color>
            <Named>Black</Named>
        </Color>
        <DashStyle>Solid</DashStyle>
        <Width>1</Width>
    </GridLines>
    <Title>
        <Caption>
            <Color>
                <Named>Black</Named>
            </Color>
            <Family>Arial</Family>
            <Style>Bold</Style>
            <Size>12</Size>
        </Caption>
        <Range>
            <Color>
                <Named>Black</Named>
            </Color>
            <Family>Arial</Family>
            <Style>Regular</Style>
            <Size>8.25</Size>
        </Range>
    </Title>
    <Legend>
        <Color>
            <Named>Black</Named>
        </Color>
        <Family>Arial</Family>
        <Style>Regular</Style>
        <Size>8.25</Size>
    </Legend>
    <XAxis>
        <Major>
            <Color>
                <Named>Black</Named>
            </Color>
            <Family>Arial</Family>
            <Style>Regular</Style>
            <Size>8.25</Size>
        </Major>
        <Minor>
            <Color>
                <Named>Black</Named>
            </Color>
            <Family>Arial</Family>
            <Style>Regular</Style>
            <Size>8.25</Size>
        </Minor>
    </XAxis>
</Scheme>

```



```

</XAxis>
<YAxis>
  <Major>
    <Color>
      <Named>Black</Named>
    </Color>
    <Family>Arial</Family>
    <Style>Regular</Style>
    <Size>8.25</Size>
  </Major>
  <Minor>
    <Color>
      <Named>Black</Named>
    </Color>
    <Family>Arial</Family>
    <Style>Regular</Style>
    <Size>8.25</Size>
  </Minor>
  <Title>
    <Color>
      <Named>Black</Named>
    </Color>
    <Family>Arial</Family>
    <Style>Regular</Style>
    <Size>8.25</Size>
  </Title>
</YAxis>
<Series>
  <Color>
    <Named>Black</Named>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>2</Width>
  <FillColor>
    <Named>Black</Named>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<Series>
  <Color>
    <Named>Black</Named>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>2</Width>
  <FillColor>
    <Named>Red</Named>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<Series>
  <Color>
    <Named>Black</Named>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
    <RGB>62;169;0</RGB>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<Series>
  <Color>
    <Named>Black</Named>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
    <RGB>156;38;115</RGB>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<Series>
  <Color>
    <RGB>255;120;0</RGB>
  </Color>

```



```

    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
    <FillColor>
      <RGB>255;120;0</RGB>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
  </Series>
<Series>
  <Color>
    <RGB>25;108;229</RGB>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
    <RGB>25;108;229</RGB>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<Series>
  <Color>
    <RGB>60;117;28</RGB>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
    <RGB>60;117;28</RGB>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<Series>
  <Color>
    <RGB>230;176;18</RGB>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
    <RGB>230;176;18</RGB>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<Series>
  <Color>
    <RGB>0;186;193</RGB>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
    <RGB>0;186;193</RGB>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<Series>
  <Color>
    <RGB>255;178;127</RGB>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
    <RGB>255;178;127</RGB>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<Series>
  <Color>
    <RGB>100;79;190</RGB>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
    <RGB>100;79;190</RGB>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<Series>
  <Color>

```



```

        <RGB>209;36;33</RGB>
      </Color>
      <DashStyle>Solid</DashStyle>
      <Width>0</Width>
      <FillColor>
        <RGB>209;36;33</RGB>
      </FillColor>
      <FillStyle>Percent20</FillStyle>
    </Series>
    <Series>
      <Color>
        <RGB>38;87;135</RGB>
      </Color>
      <DashStyle>Solid</DashStyle>
      <Width>0</Width>
      <FillColor>
        <RGB>38;87;135</RGB>
      </FillColor>
      <FillStyle>Percent20</FillStyle>
    </Series>
    <Series>
      <Color>
        <RGB>94;176;176</RGB>
      </Color>
      <DashStyle>Solid</DashStyle>
      <Width>0</Width>
      <FillColor>
        <RGB>94;176;176</RGB>
      </FillColor>
      <FillStyle>Percent20</FillStyle>
    </Series>
    <LevelLine>
      <Color>
        <RGB>0;0;153</RGB>
      </Color>
      <DashStyle>Solid</DashStyle>
      <Width>1</Width>
    </LevelLine>
    <LevelLine>
      <Color>
        <RGB>120;120;120</RGB>
      </Color>
      <DashStyle>Solid</DashStyle>
      <Width>1</Width>
    </LevelLine>
  </Scheme>
</chartRequest>
</GetChart_Request_2>

</Body>
</Envelope>

```

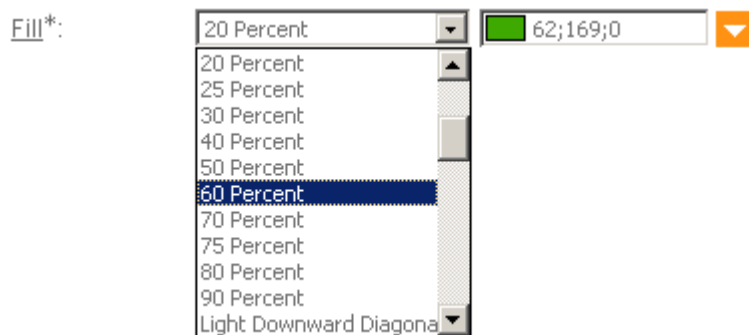
8.6.2.3 Other Formatting Options

This section provides information about other formatting options available in Request Builder for changing the colour of lines, font, text and fill.

8.6.2.3.1 Fill Format

This control configures the fill pattern and color.





Other fill pattern examples:

- 5 percent
- 50 percent
- 90 percent
- Vertical
- Large Grid
- Forward Diagonal
- Sphere
- Wave
- Large Checker Board

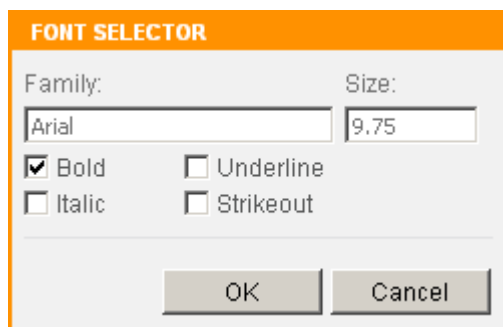
8.6.2.3.2 Text Format

Using this control you can set the text color and configure font (see section Font Format later):



8.6.2.3.3 Font Format

This control allows specifying font family, size and applying additional formatting, such as Bold, Italic, Underline or Strikeout:



You can use the following fonts:

Font Name
Aharoni
Andalus
Angsana New
AngsanaUPC
Arabic Transparent
Arial
Arial Black
Batang

Font Name
DotumChe
Estrangelo Edessa
EucrosiaUPC
Fixed Miriam Transparent
Franklin Gothic Medium
FrankRuehl
FreesiaUPC
Gautami

Font Name
LilyUPC
Lucida Console
Lucida Sans Unicode
Mangal
Marlett
Microsoft Sans Serif
MingLiU
Miriam

Font Name
PMingLiU
Raavi
Rod
Rod Transparent
Shruti
SimHei
Simplified Arabic
Simplified Arabic Fixed



BatangChe	Georgia	Miriam Fixed	SimSun
Browallia New	Gulim	Miriam Transparent	Sylfaen
BrowalliaUPC	GulimChe	MS Gothic	Symbol
Comic Sans MS	Gungsuh	MS Mincho	Tahoma
Cordia New	GungsuhChe	MS PGothic	Times New Roman
CordiaUPC	Impact	MS PMincho	Traditional Arabic
Courier New	IrisUPC	MS UI Gothic	Trebuchet MS
David	JasmineUPC	MV Boli	Tunga
David Transparent	KodchiangUPC	Narkisim	Verdana
DilleniaUPC	Latha	NSimSun	Webdings
Dotum	Levenim MT	Palatino Linotype	Wingdings

8.6.2.3.4 Line Format

Use this control to select line color, style (Solid, Dash, Dash Dot, Dash Dot Dot, Dot) and thickness (in pixels):



8.6.3 More Sample Requests

This section provides two more samples of chart requests.

8.6.3.1 Case 1

The chart below shows Hourly statistics for FTSE 100 INDEX.



To get this chart, you need to pass the following request:

XML Sample Request - Making Request for Hourly FTSE 100 Index Chart

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Charts/Charts.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Charts_1/GetChart_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
```



```

<Body>
<GetChart_Request_2 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Charts_1">
  <chartRequest ImageType="PNG" Width="700" Height="400" Culture="en-GB">
    <TimeSeries>
      <TimeSeriesRequest xmlns="http://metastock.com/imageserver/financial">
        <Symbol>.FTSE</Symbol>
        <Reference>d1</Reference>
      </TimeSeriesRequest>
    </TimeSeries>
    <Analyses>
      <Analysis xmlns="http://metastock.com/imageserver/analysis">
        <Reference>a1</Reference>
        <Line>
          <Instrument1>
            <Reference>d1</Reference>
          </Instrument1>
          <Series1>
            <Name>FilledLine</Name>
          </Series1>
        </Line>
      </Analysis>
      <Analysis xmlns="http://metastock.com/imageserver/analysis">
        <Reference>a2</Reference>
        <Vol>
          <Instrument1>
            <Reference>d1</Reference>
          </Instrument1>
        </Vol>
      </Analysis>
    </Analyses>
    <StandardTemplate xmlns="http://metastock.com/imageserver/financial">
      <Title>
        <Caption>
          <Visible>true</Visible>
          <Customized>>false</Customized>
        </Caption>
        <Range>
          <Visible>>false</Visible>
        </Range>
      </Title>
      <Legend>
        <Visible>true</Visible>
        <Information>Long</Information>
        <Layout>MultiLine</Layout>
        <Position>Overlaid</Position>
      </Legend>
      <Instrument>Name</Instrument>
      <Delimiter>%</Delimiter>
      <GridLines>Horizontal</GridLines>
      <YAxisMarkers>None</YAxisMarkers>
      <YAxisTitles>All</YAxisTitles>
      <Brand>None</Brand>
      <Interval>
        <CommonType xmlns="http://metastock.com/applications/data">Hours</CommonType>
        <Multiplier xmlns="http://metastock.com/applications/data">1</Multiplier>
      </Interval>
      <ShowNonTradedPeriods>>false</ShowNonTradedPeriods>
      <ShowHolidays>>false</ShowHolidays>
      <ShowGaps>true</ShowGaps>
      <XAxis>
        <Visible>true</Visible>
        <Position>Bottom</Position>
        <Range>
          <Fixed>
            <First>2009-05-05T00:00:00</First>
            <Last>2009-05-12T00:00:00</Last>
          </Fixed>
        </Range>
      </XAxis>
      <Subchart>
        <Weight>5</Weight>
        <YAxis>
          <Visible>true</Visible>
          <Position>Right</Position>

```



```

    <Invert>false</Invert>
    <Logarithmic>false</Logarithmic>
    <Display>
      <Mode>Automatic</Mode>
    </Display>
    <Range>
      <Automatic />
    </Range>
    <Analysis>
      <Reference>a1</Reference>
      <LevelLine>4462</LevelLine>
    </Analysis>
  </YAxis>
</Subchart>
<Subchart>
  <Weight>2</Weight>
  <YAxis>
    <Visible>true</Visible>
    <Position>Right</Position>
    <Invert>false</Invert>
    <Logarithmic>false</Logarithmic>
    <Display>
      <Mode>Automatic</Mode>
    </Display>
    <Range>
      <Fixed>
        <First>0</First>
        <Last>1000000000000</Last>
      </Fixed>
    </Range>
    <Analysis>
      <Reference>a2</Reference>
      <LevelLine>2000000000000</LevelLine>
      <LevelLine>1250000000000</LevelLine>
      <LevelLine>2500000000000</LevelLine>
      <LevelLine>3750000000000</LevelLine>
    </Analysis>
  </YAxis>
</Subchart>
</StandardTemplate>
<Scheme xmlns="http://metastock.com/imageserver/financial">
  <Background>
    <BackgroundMode>Gradient</BackgroundMode>
    <StartColor>
      <RGB>0;0;100</RGB>
    </StartColor>
    <EndColor>
      <RGB>0;0;50</RGB>
    </EndColor>
    <HatchStyle>LargeGrid</HatchStyle>
    <GradientMode>ForwardDiagonal</GradientMode>
    <ImageMode>Centered</ImageMode>
  </Background>
  <Border>
    <Color>
      <RGB>139;139;155</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>1</Width>
  </Border>
  <GridLines>
    <Color>
      <RGB>139;139;155</RGB>
    </Color>
    <DashStyle>Dot</DashStyle>
    <Width>1</Width>
  </GridLines>
  <Title>
    <Caption>
      <Color>
        <Named>Orange</Named>
      </Color>
      <Family>Arial</Family>
      <Style>Bold</Style>
      <Size>12</Size>
    </Caption>
  </Title>
</Scheme>

```



```

</Caption>
<Range>
  <Color>
    <Named>WhiteSmoke</Named>
  </Color>
  <Family>Arial</Family>
  <Style>Regular</Style>
  <Size>8.25</Size>
</Range>
</Title>
<Legend>
  <Color>
    <Named>WhiteSmoke</Named>
  </Color>
  <Family>Arial</Family>
  <Style>Regular</Style>
  <Size>8.25</Size>
</Legend>
<XAxis>
  <Major>
    <Color>
      <Named>WhiteSmoke</Named>
    </Color>
    <Family>Arial</Family>
    <Style>Bold</Style>
    <Size>9.75</Size>
  </Major>
  <Minor>
    <Color>
      <Named>WhiteSmoke</Named>
    </Color>
    <Family>Arial</Family>
    <Style>Regular</Style>
    <Size>8.25</Size>
  </Minor>
</XAxis>
<YAxis>
  <Major>
    <Color>
      <Named>WhiteSmoke</Named>
    </Color>
    <Family>Arial</Family>
    <Style>Bold</Style>
    <Size>9.75</Size>
  </Major>
  <Minor>
    <Color>
      <Named>WhiteSmoke</Named>
    </Color>
    <Family>Arial</Family>
    <Style>Regular</Style>
    <Size>8.25</Size>
  </Minor>
  <Title>
    <Color>
      <Named>WhiteSmoke</Named>
    </Color>
    <Family>Arial</Family>
    <Style>Regular</Style>
    <Size>8.25</Size>
  </Title>
</YAxis>
<Series>
  <Color>
    <RGB>255;153;0</RGB>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>2</Width>
  <FillColor>
    <RGB>255;153;0</RGB>
  </FillColor>
  <FillStyle>Percent90</FillStyle>
</Series>
<Series>
  <Color>

```



```

        <Named>Orange</Named>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>5</Width>
    <FillColor>
        <Named>Red</Named>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
</Series>
<Series>
    <Color>
        <RGB>62;169;0</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
    <FillColor>
        <RGB>62;169;0</RGB>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
</Series>
<Series>
    <Color>
        <RGB>156;38;115</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
    <FillColor>
        <RGB>156;38;115</RGB>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
</Series>
<Series>
    <Color>
        <RGB>255;120;0</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
    <FillColor>
        <RGB>255;120;0</RGB>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
</Series>
<Series>
    <Color>
        <RGB>25;108;229</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
    <FillColor>
        <RGB>25;108;229</RGB>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
</Series>
<Series>
    <Color>
        <RGB>60;117;28</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
    <FillColor>
        <RGB>60;117;28</RGB>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
</Series>
<Series>
    <Color>
        <RGB>230;176;18</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
    <FillColor>
        <RGB>230;176;18</RGB>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
</Series>

```



```

<Series>
  <Color>
    <RGB>0;186;193</RGB>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
    <RGB>0;186;193</RGB>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<Series>
  <Color>
    <RGB>255;178;127</RGB>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
    <RGB>255;178;127</RGB>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<Series>
  <Color>
    <RGB>100;79;190</RGB>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
    <RGB>100;79;190</RGB>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<Series>
  <Color>
    <RGB>209;36;33</RGB>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
    <RGB>209;36;33</RGB>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<Series>
  <Color>
    <RGB>38;87;135</RGB>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
    <RGB>38;87;135</RGB>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<Series>
  <Color>
    <RGB>94;176;176</RGB>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
    <RGB>94;176;176</RGB>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<LevelLine>
  <Color>
    <RGB>255;102;0</RGB>
  </Color>
  <DashStyle>Dash</DashStyle>
  <Width>2</Width>
</LevelLine>
<LevelLine>
  <Color>

```



```

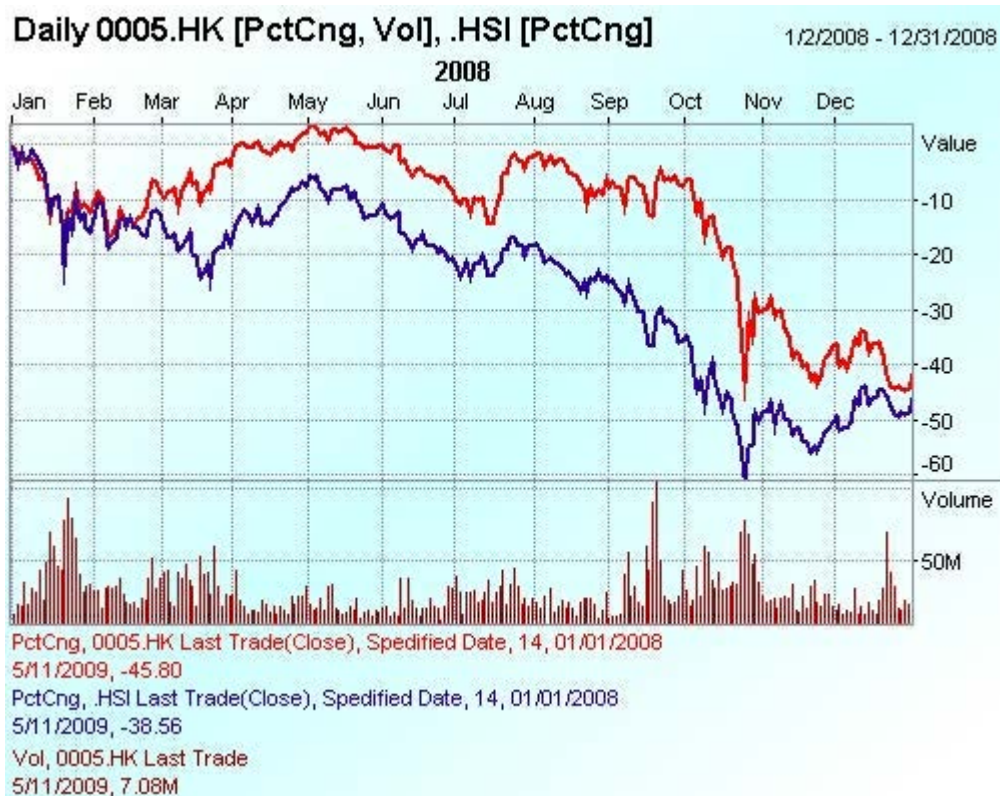
        <Named>Gray</Named>
      </Color>
      <DashStyle>Dash</DashStyle>
      <Width>1</Width>
    </LevelLine>
    <LevelLine>
      <Color>
        <Named>Gray</Named>
      </Color>
      <DashStyle>Dash</DashStyle>
      <Width>1</Width>
    </LevelLine>
    <LevelLine>
      <Color>
        <Named>Gray</Named>
      </Color>
      <DashStyle>Dash</DashStyle>
      <Width>1</Width>
    </LevelLine>
    <LevelLine>
      <Color>
        <Named>Gray</Named>
      </Color>
      <DashStyle>Dash</DashStyle>
      <Width>1</Width>
    </LevelLine>
  </Scheme>
</chartRequest>
</GetChart_Request_2>
</Body>
</Envelope>

```

8.6.3.2 Case 2

The chart below shows daily fluctuations (in %) of HSBC HOLDINGS with HANG SENG INDEX against their respective values at the beginning of the requested period.





To request such a chart, you must make the following request:

XML Sample Request - Making Request for Daily 0005.HK

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Charts/Charts.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Charts_1/GetChart_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetChart_Request_2 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
      xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Charts_1">
      <chartRequest ImageType="PNG" Width="700" Height="400" Culture="en-GB">
        <TimeSeries>
          <TimeSeriesRequest xmlns="http://metastock.com/imageserver/financial">
            <Symbol>.FTSE</Symbol>
            <Reference>d1</Reference>
          </TimeSeriesRequest>
        </TimeSeries>
        <Analyses>
          <Analysis xmlns="http://metastock.com/imageserver/analysis">
            <Reference>a1</Reference>
            <Line>
              <Instrument1>
                <Reference>d1</Reference>
              </Instrument1>
              <Series1>
                <Name>FilledLine</Name>
              </Series1>
            </Line>
          </Analysis>
        </Analyses>
      </chartRequest>
    </GetChart_Request_2>
  </Body>
</Envelope>
```



```

</Analysis>
<Analysis xmlns="http://metastock.com/imageserver/analysis">
  <Reference>a2</Reference>
  <Vol>
    <Instrument1>
      <Reference>d1</Reference>
    </Instrument1>
  </Vol>
</Analysis>
</Analyses>
<StandardTemplate xmlns="http://metastock.com/imageserver/financial">
  <Title>
    <Caption>
      <Visible>true</Visible>
      <Customized>>false</Customized>
    </Caption>
    <Range>
      <Visible>>false</Visible>
    </Range>
  </Title>
  <Legend>
    <Visible>true</Visible>
    <Information>Long</Information>
    <Layout>MultiLine</Layout>
    <Position>Overlaid</Position>
  </Legend>
  <Instrument>Name</Instrument>
  <Delimiter>%</Delimiter>
  <GridLines>Horizontal</GridLines>
  <YAxisMarkers>None</YAxisMarkers>
  <YAxisTitles>All</YAxisTitles>
  <Brand>None</Brand>
  <Interval>
    <CommonType xmlns="http://metastock.com/applications/data">Hours</CommonType>
    <Multiplier xmlns="http://metastock.com/applications/data">1</Multiplier>
  </Interval>
  <ShowNonTradedPeriods>>false</ShowNonTradedPeriods>
  <ShowHolidays>>false</ShowHolidays>
  <ShowGaps>true</ShowGaps>
  <XAxis>
    <Visible>true</Visible>
    <Position>Bottom</Position>
    <Range>
      <Fixed>
        <First>2009-05-05T00:00:00</First>
        <Last>2009-05-12T00:00:00</Last>
      </Fixed>
    </Range>
  </XAxis>
  <Subchart>
    <Weight>5</Weight>
    <YAxis>
      <Visible>true</Visible>
      <Position>Right</Position>
      <Invert>>false</Invert>
      <Logarithmic>>false</Logarithmic>
      <Display>
        <Mode>Automatic</Mode>
      </Display>
      <Range>
        <Automatic />
      </Range>
      <Analysis>
        <Reference>a1</Reference>
        <LevelLine>4462</LevelLine>
      </Analysis>
    </YAxis>
  </Subchart>
  <Subchart>
    <Weight>2</Weight>
    <YAxis>
      <Visible>true</Visible>
      <Position>Right</Position>
      <Invert>>false</Invert>
      <Logarithmic>>false</Logarithmic>

```



```

    <Display>
      <Mode>Automatic</Mode>
    </Display>
    <Range>
      <Fixed>
        <First>0</First>
        <Last>100000000000</Last>
      </Fixed>
    </Range>
    <Analysis>
      <Reference>a2</Reference>
      <LevelLine>200000000000</LevelLine>
      <LevelLine>125000000000</LevelLine>
      <LevelLine>250000000000</LevelLine>
      <LevelLine>375000000000</LevelLine>
    </Analysis>
  </YAxis>
</Subchart>
</StandardTemplate>
<Scheme xmlns="http://metastock.com/imageserver/financial">
  <Background>
    <BackgroundMode>Gradient</BackgroundMode>
    <StartColor>
      <RGB>0;0;100</RGB>
    </StartColor>
    <EndColor>
      <RGB>0;0;50</RGB>
    </EndColor>
    <HatchStyle>LargeGrid</HatchStyle>
    <GradientMode>ForwardDiagonal</GradientMode>
    <ImageMode>Centered</ImageMode>
  </Background>
  <Border>
    <Color>
      <RGB>139;139;155</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>1</Width>
  </Border>
  <GridLines>
    <Color>
      <RGB>139;139;155</RGB>
    </Color>
    <DashStyle>Dot</DashStyle>
    <Width>1</Width>
  </GridLines>
  <Title>
    <Caption>
      <Color>
        <Named>Orange</Named>
      </Color>
      <Family>Arial</Family>
      <Style>Bold</Style>
      <Size>12</Size>
    </Caption>
    <Range>
      <Color>
        <Named>WhiteSmoke</Named>
      </Color>
      <Family>Arial</Family>
      <Style>Regular</Style>
      <Size>8.25</Size>
    </Range>
  </Title>
  <Legend>
    <Color>
      <Named>WhiteSmoke</Named>
    </Color>
    <Family>Arial</Family>
    <Style>Regular</Style>
    <Size>8.25</Size>
  </Legend>
  <XAxis>
    <Major>
      <Color>

```



```

        <Named>WhiteSmoke</Named>
    </Color>
    <Family>Arial</Family>
    <Style>Bold</Style>
    <Size>9.75</Size>
</Major>
<Minor>
    <Color>
        <Named>WhiteSmoke</Named>
    </Color>
    <Family>Arial</Family>
    <Style>Regular</Style>
    <Size>8.25</Size>
</Minor>
</XAxis>
<YAxis>
    <Major>
        <Color>
            <Named>WhiteSmoke</Named>
        </Color>
        <Family>Arial</Family>
        <Style>Bold</Style>
        <Size>9.75</Size>
    </Major>
    <Minor>
        <Color>
            <Named>WhiteSmoke</Named>
        </Color>
        <Family>Arial</Family>
        <Style>Regular</Style>
        <Size>8.25</Size>
    </Minor>
    <Title>
        <Color>
            <Named>WhiteSmoke</Named>
        </Color>
        <Family>Arial</Family>
        <Style>Regular</Style>
        <Size>8.25</Size>
    </Title>
</YAxis>
<Series>
    <Color>
        <RGB>255;153;0</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>2</Width>
    <FillColor>
        <RGB>255;153;0</RGB>
    </FillColor>
    <FillStyle>Percent90</FillStyle>
</Series>
<Series>
    <Color>
        <Named>Orange</Named>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>5</Width>
    <FillColor>
        <Named>Red</Named>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
</Series>
<Series>
    <Color>
        <RGB>62;169;0</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
    <FillColor>
        <RGB>62;169;0</RGB>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
</Series>
<Series>

```



```

    <Color>
      <RGB>156;38;115</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>0</Width>
    <FillColor>
      <RGB>156;38;115</RGB>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
  </Series>
</Series>
<Series>
  <Color>
    <RGB>255;120;0</RGB>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
    <RGB>255;120;0</RGB>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<Series>
  <Color>
    <RGB>25;108;229</RGB>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
    <RGB>25;108;229</RGB>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<Series>
  <Color>
    <RGB>60;117;28</RGB>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
    <RGB>60;117;28</RGB>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<Series>
  <Color>
    <RGB>230;176;18</RGB>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
    <RGB>230;176;18</RGB>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<Series>
  <Color>
    <RGB>0;186;193</RGB>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
    <RGB>0;186;193</RGB>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<Series>
  <Color>
    <RGB>255;178;127</RGB>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
    <RGB>255;178;127</RGB>
  </FillColor>
  <FillStyle>Percent20</FillStyle>

```



```

</Series>
<Series>
  <Color>
    <RGB>100;79;190</RGB>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
    <RGB>100;79;190</RGB>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<Series>
  <Color>
    <RGB>209;36;33</RGB>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
    <RGB>209;36;33</RGB>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<Series>
  <Color>
    <RGB>38;87;135</RGB>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
    <RGB>38;87;135</RGB>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<Series>
  <Color>
    <RGB>94;176;176</RGB>
  </Color>
  <DashStyle>Solid</DashStyle>
  <Width>0</Width>
  <FillColor>
    <RGB>94;176;176</RGB>
  </FillColor>
  <FillStyle>Percent20</FillStyle>
</Series>
<LevelLine>
  <Color>
    <RGB>255;102;0</RGB>
  </Color>
  <DashStyle>Dash</DashStyle>
  <Width>2</Width>
</LevelLine>
<LevelLine>
  <Color>
    <Named>Gray</Named>
  </Color>
  <DashStyle>Dash</DashStyle>
  <Width>1</Width>
</LevelLine>
<LevelLine>
  <Color>
    <Named>Gray</Named>
  </Color>
  <DashStyle>Dash</DashStyle>
  <Width>1</Width>
</LevelLine>
<LevelLine>
  <Color>
    <Named>Gray</Named>
  </Color>
  <DashStyle>Dash</DashStyle>
  <Width>1</Width>
</LevelLine>
<LevelLine>
  <Color>

```



```

        <Named>Gray</Named>
        </Color>
        <DashStyle>Dash</DashStyle>
        <Width>1</Width>
        </LevelLine>
        </Scheme>
        </chartRequest>
        </GetChart_Request_2>
    </Body>
</Envelope>

```

8.6.4 Building a Chart Based on Custom Time Series Data

Steps for building charts based on custom Time Series information are almost the same as for building regular charts. The only difference is that you need specify a custom data provider and add to a request all information, including all data points, for building charts.

To specify a custom data provider you should do the following in Time Series section of XML Request to GetChart_1 operation:

1. Set Data Provider to "CUSTOM".
2. Set Feed to "C".
3. Symbol value represents a reference to the Custom Time Series section and is supposed to be the same as the value of the Symbol parameter in the Custom Time Series section (see on the screenshots below).

TIME SERIES

■ **Xml** - Remove

Reference:

Symbol:

Field:

Data Provider:

Feed:

Request Range

Type:

Custom Time Series functionality allows you to specify all time series data for building charts. The description of minimal set of parameters which should be specified is given in the table below:

Parameter	Description
Symbol	Represents the reference to Custom Time Series section.
Field	This is the field of data that needs to be retrieved for the symbol (RIC). Leaving this blank will use the default field of a symbol (default field is Close). Note: Currently this parameter does not have influence on chart. For building chart based on Open, High, Low, Close, Volume values please use the "Action" item from the Analysis section as shown in Sample 2 later.
Field Name	The name of the field which would be displayed on the chart (e.g. Last Trade (Close)).
Display Unit	This defines how Y-Axis display units are displayed.
Format	Format of display units. The possible options are: Automatic: Automatic adjustment of units.



	• Decimal: Decimal display units. • Fraction: Fractional display units.
Precision	Defines the number of digits after the decimal point.
Interval	Specifies the data intervals.
Type	Specifies the type of the interval. The choices are: • Unknown • Undefined • Ticks • Seconds • Minutes • Hours • Days • Weeks • Months • Quarters • Years
Multiplier	The interval of the unit defined in Type.

CUSTOM TIME SERIES

■ Xml - Remove

Name:

Symbol:

Field:

Field Name:

☐ LocalName

Locale/Name:

Display Unit

Format/Precision*:

Interval

Type/Multiplier*:

Fill in the Time Series Data section with financial information such as Date, Open, High, Low, Close and Volume for each data point:



Time Series Data

Data:

Date*	Open	High	Low	Close	Volume	
07/27/2010 2:00 PM	128.62	128.99	128.29	128.59	54100	Remove
07/27/2010 2:30 PM	128.62	129.15	128.51	128.81	48500	Remove
07/27/2010 3:00 PM	128.86	128.86	128.3	128.36	39800	Remove
07/27/2010 3:30 PM	128.34	128.38	127.9	128.11	48500	Remove
07/27/2010 4:00 PM	128.12	128.8	128.1	128.8	26100	Remove
07/27/2010 4:30 PM	128.82	129.06	128.73	128.97	28500	Remove
07/27/2010 5:00 PM	128.93	129	128.81	128.82	24900	Remove
07/27/2010 5:30 PM	128.8	128.89	128.52	128.52	26700	Remove
07/27/2010 6:00 PM	128.48	128.85	128.39	128.79	35500	Remove
07/27/2010 6:30 PM	128.77	128.91	128.57	128.83	39700	Remove
07/27/2010 7:00 PM	128.85	128.98	128.46	128.69	46200	Remove
07/27/2010 7:30 PM	128.69	128.8	128.5	128.76	45100	Remove
07/27/2010 8:00 PM	128.77	128.81	128.57	128.64	78100	Remove
07/27/2010 8:30 PM	128.63	128.63	128.63	128.63	206900	Remove

Note: You do not need to input values of all items (Open, High, Low, Close, Volume) for each data point. It is enough to specify only values for the items which will be used in building a chart.

8.6.4.1 Sample 1

Please note that for this sample only Close and Volume values of financial data were provided, so the Row element of Time series Data section looks like:

```
<Row>
<Date>2010-07-27T14:00:00</Date>
<Close>128.59</Close>
<Volume>54100</Volume>
</Row>
```



To get such chart the XML file will look like the following:

XML Sample Request - Building 30 Minutes Chart for Custom Data

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Charts/Charts.svc</To>
```



```

<MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
<Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Charts_1/
GetChart_1</Action>
  <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
    <ApplicationID>[AppID]</ApplicationID>
    <Token>[Impersonation Token]</Token>
  </Authorization>
</Header>
<Body>
  <GetChart_Request_2 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Charts_1">
    <chartRequest ImageType="PNG" Width="500" Height="300" Title="Chart for Custom Data" Culture="en-US">
      <TimeSeries>
        <TimeSeriesRequest xmlns="http://metastock.com/imageserver/financial">
          <Symbol>Custom_Symbol</Symbol>
          <Reference>0</Reference>
          <Feed>C</Feed>
          <DataProvider>CUSTOM</DataProvider>
        </TimeSeriesRequest>
      </TimeSeries>
      <CustomTimeSeries>
        <TimeSeriesCustom xmlns="http://metastock.com/applications/data">
          <Symbol>Custom_Symbol</Symbol>
          <DisplayUnit>
            <Format>Decimal</Format>
            <Precision>2</Precision>
          </DisplayUnit>
          <Interval>
            <CommonType>Minutes</CommonType>
            <Multiplier>30</Multiplier>
          </Interval>
          <TimeSeriesData>
            <Row>
              <Date>2010-07-27T14:00:00</Date>
              <Close>128.59</Close>
              <Volume>54100</Volume>
            </Row>
            <Row>
              <Date>2010-07-27T14:30:00</Date>
              <Close>128.81</Close>
              <Volume>48500</Volume>
            </Row>
            <Row>
              <Date>2010-07-27T15:00:00</Date>
              <Close>128.36</Close>
              <Volume>39800</Volume>
            </Row>
            <Row>
              <Date>2010-07-27T15:30:00</Date>
              <Close>128.11</Close>
              <Volume>48500</Volume>
            </Row>
            <Row>
              <Date>2010-07-27T16:00:00</Date>
              <Close>128.8</Close>
              <Volume>26100</Volume>
            </Row>
            <Row>
              <Date>2010-07-27T16:30:00</Date>
              <Close>128.97</Close>
              <Volume>28500</Volume>
            </Row>
            <Row>
              <Date>2010-07-27T17:00:00</Date>
              <Close>128.82</Close>
              <Volume>24900</Volume>
            </Row>
            <Row>
              <Date>2010-07-27T17:30:00</Date>
              <Close>128.52</Close>
              <Volume>26700</Volume>
            </Row>
            <Row>
              <Date>2010-07-27T18:00:00</Date>
              <Close>128.79</Close>
            </Row>
          </TimeSeriesData>
        </TimeSeriesCustom>
      </CustomTimeSeries>
    </chartRequest>
  </GetChart_Request_2>
</Body>

```



```

    <Volume>35500</Volume>
  </Row>
  <Row>
    <Date>2010-07-27T18:30:00</Date>
    <Close>128.83</Close>
    <Volume>39700</Volume>
  </Row>
  <Row>
    <Date>2010-07-27T19:00:00</Date>
    <Close>128.69</Close>
    <Volume>46200</Volume>
  </Row>
  <Row>
    <Date>2010-07-27T19:30:00</Date>
    <Close>128.76</Close>
    <Volume>45100</Volume>
  </Row>
  <Row>
    <Date>2010-07-27T20:00:00</Date>
    <Close>128.64</Close>
    <Volume>78100</Volume>
  </Row>
  <Row>
    <Date>2010-07-27T20:30:00</Date>
    <Close>128.63</Close>
    <Volume>206900</Volume>
  </Row>
</TimeSeriesData>
</TimeSeriesCustom>
</CustomTimeSeries>
<Analyses>
  <Analysis xmlns="http://metastock.com/imageserver/analysis">
    <Reference>a0</Reference>
    <Line>
      <Instrument1>
        <Reference>0</Reference>
      </Instrument1>
    </Line>
  </Analysis>
  <Analysis xmlns="http://metastock.com/imageserver/analysis">
    <Reference>a</Reference>
    <Vol>
      <Instrument1>
        <Reference>0</Reference>
      </Instrument1>
    </Vol>
  </Analysis>
</Analyses>
<StandardTemplate xmlns="http://metastock.com/imageserver/financial">
  <Title>
    <Caption>
      <Visible>true</Visible>
      <Customized>>false</Customized>
    </Caption>
    <Range>
      <Visible>true</Visible>
    </Range>
  </Title>
  <Legend>
    <Visible>true</Visible>
    <Information>Short</Information>
    <Layout>MultiLine</Layout>
    <Position>Overlaid</Position>
  </Legend>
  <Instrument>Symbol</Instrument>
  <Delimiter>%</Delimiter>
  <GridLines>Both</GridLines>
  <YAxisMarkers>None</YAxisMarkers>
  <YAxisTitles>Currency Type</YAxisTitles>
  <Brand>None</Brand>
  <Interval>
    <CommonType xmlns="http://metastock.com/applications/data">Minutes</CommonType>
    <Multiplier xmlns="http://metastock.com/applications/data">30</Multiplier>
  </Interval>
  <ShowNonTradedPeriods>>false</ShowNonTradedPeriods>

```



```

<ShowHolidays>false</ShowHolidays>
<ShowGaps>false</ShowGaps>
<XAxis>
  <Visible>true</Visible>
  <Position>Bottom</Position>
  <Range>
    <Fixed>
      <First>2010-07-27T00:00:00</First>
      <Last>2010-07-28T00:00:00</Last>
    </Fixed>
  </Range>
</XAxis>
<Subchart>
  <Weight>5</Weight>
  <YAxis>
    <Visible>true</Visible>
    <Position>Right</Position>
    <Invert>false</Invert>
    <Logarithmic>false</Logarithmic>
    <Display>
      <Mode>Automatic</Mode>
    </Display>
    <Range>
      <Automatic />
    </Range>
    <Analysis>
      <Reference>a0</Reference>
    </Analysis>
  </YAxis>
</Subchart>
<Subchart>
  <Weight>2</Weight>
  <YAxis>
    <Visible>true</Visible>
    <Position>Right</Position>
    <Invert>false</Invert>
    <Logarithmic>false</Logarithmic>
    <Display>
      <Mode>Automatic</Mode>
    </Display>
    <Range>
      <Automatic />
    </Range>
    <Analysis>
      <Reference>a</Reference>
    </Analysis>
  </YAxis>
</Subchart>
</StandardTemplate>
<Scheme xmlns="http://metastock.com/imageserver/financial">
  <Background>
    <BackgroundMode>Gradient</BackgroundMode>
    <StartColor>
      <RGB>255;255;255</RGB>
    </StartColor>
    <EndColor>
      <RGB>230;230;230</RGB>
    </EndColor>
    <HatchStyle>LargeGrid</HatchStyle>
    <GradientMode>ForwardDiagonal</GradientMode>
    <ImageMode>Centered</ImageMode>
  </Background>
  <Border>
    <Color>
      <RGB>100;100;100</RGB>
    </Color>
    <DashStyle>Dot</DashStyle>
    <Width>1</Width>
  </Border>
  <GridLines>
    <Color>
      <RGB>200;200;200</RGB>
    </Color>
    <DashStyle>Dot</DashStyle>
    <Width>1</Width>
  </GridLines>

```



```

</GridLines>
<Title>
<Caption>
  <Color>
    <RGB>0;0;0</RGB>
  </Color>
  <Family>Arial</Family>
  <Style>Bold</Style>
  <Size>12</Size>
</Caption>
<Range>
  <Color>
    <RGB>0;0;0</RGB>
  </Color>
  <Family>Arial</Family>
  <Style>Regular</Style>
  <Size>8.25</Size>
</Range>
</Title>
<Legend>
  <Color>
    <RGB>0;0;0</RGB>
  </Color>
  <Family>Arial</Family>
  <Style>Regular</Style>
  <Size>8.25</Size>
</Legend>
<XAxis>
  <Major>
    <Color>
      <RGB>50;50;50</RGB>
    </Color>
    <Family>Arial</Family>
    <Style>Regular</Style>
    <Size>9</Size>
  </Major>
  <Minor>
    <Color>
      <RGB>50;50;50</RGB>
    </Color>
    <Family>Arial</Family>
    <Style>Regular</Style>
    <Size>8</Size>
  </Minor>
</XAxis>
<YAxis>
  <Major>
    <Color>
      <RGB>50;50;50</RGB>
    </Color>
    <Family>Arial</Family>
    <Style>Regular</Style>
    <Size>9</Size>
  </Major>
  <Minor>
    <Color>
      <RGB>50;50;50</RGB>
    </Color>
    <Family>Arial</Family>
    <Style>Regular</Style>
    <Size>8</Size>
  </Minor>
  <Title>
    <Color>
      <RGB>50;50;50</RGB>
    </Color>
    <Family>Arial</Family>
    <Style>Regular</Style>
    <Size>8</Size>
  </Title>
</YAxis>
<Series>
  <Color>
    <RGB>0;0;153</RGB>
  </Color>

```



```

    <DashStyle>Solid</DashStyle>
    <Width>1</Width>
    <FillColor>
      <RGB>0;0;0</RGB>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
  </Series>
  <Series>
    <Color>
      <RGB>0;51;255</RGB>
    </Color>
    <DashStyle>Solid</DashStyle>
    <Width>1</Width>
    <FillColor>
      <RGB>0;0;0</RGB>
    </FillColor>
    <FillStyle>Percent20</FillStyle>
  </Series>
</Scheme>
</chartRequest>
</GetChart_Request_2>

</Body>
</Envelope>

```

8.6.4.2 Sample 2

Let's build a chart based on Open field of Time Series data.

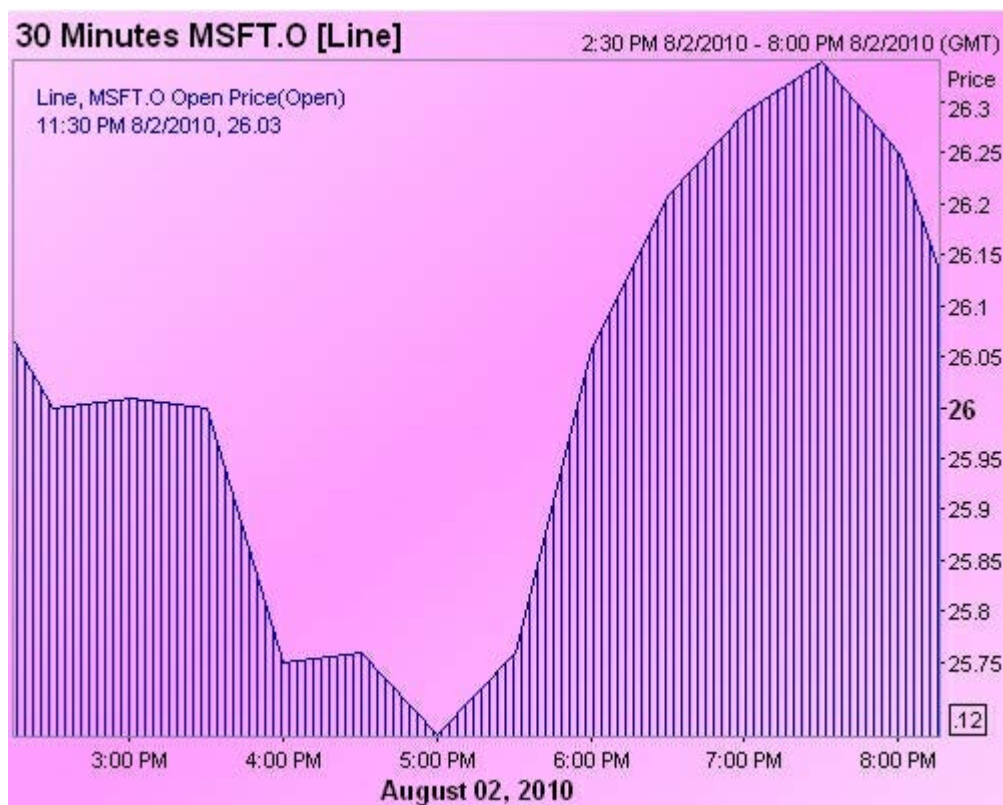
For this you should set the "Open" value in the "Action" parameter of the Analysis section by selecting which column of data to use for the analysis:

```

<Analyses>
  <Analysis xmlns="http://metastock.com/imageserver/analysis">
    <Reference>a2</Reference>
    <Line>
      <Instrument1>
        <Reference>d2</Reference>
        <Action>Open</Action>
      </Instrument1>
      <Series1>
        <Name>FilledLine</Name>
      </Series1>
    </Line>
  </Analysis>
</Analyses>

```





To get such chart the XML file will look like the following:

XML Sample Request - Building 30 Minutes [Line] Chart for MSFT.O

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Charts/Charts.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Charts_1/GetChart_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetChart_Request_2 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
      xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Charts_1">
      <chartRequest ImageType="PNG" Width="500" Height="400" Culture="en-US">
        <TimeSeries>
          <TimeSeriesRequest xmlns="http://metastock.com/imageserver/financial">
            <Symbol>MSFT.O</Symbol>
            <Reference>d2</Reference>
            <Feed>C</Feed>
            <DataProvider>CUSTOM</DataProvider>
          </TimeSeriesRequest>
        </TimeSeries>
        <CustomTimeSeries>
          <TimeSeriesCustom xmlns="http://metastock.com/applications/data">
            <Symbol>MSFT.O</Symbol>
            <Name>Custom Data</Name>
            <Field>Open</Field>
            <FieldName>Open Price</FieldName>
            <DisplayUnit>
              <Format>Decimal</Format>
              <Precision>2</Precision>
            </DisplayUnit>
          </TimeSeriesCustom>
        </CustomTimeSeries>
      </chartRequest>
    </Body>
  </Envelope>
```



```
</DisplayUnit>
<Interval>
  <CommonType>Minutes</CommonType>
  <Multiplier>30</Multiplier>
</Interval>
<TimeSeriesData>
  <Row>
    <Date>2010-08-02T08:30:00</Date>
    <Open>26.01</Open>
    <High>26.5</High>
    <Low>26.01</Low>
    <Close>26.2</Close>
    <Volume>1100</Volume>
  </Row>
  <Row>
    <Date>2010-08-02T10:30:00</Date>
    <Open>26.15</Open>
    <High>26.15</High>
    <Low>26.15</Low>
    <Close>26.15</Close>
    <Volume>1800</Volume>
  </Row>
  <Row>
    <Date>2010-08-02T11:00:00</Date>
    <Open>26.12</Open>
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```

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</Body>
</Envelope>

```



chapter 9 Charts Light

The Charts Light service provides a capability to get a chart image via HTTP in one request, with all necessary chart request parameters specified in the URL.

The following table highlights the differences between the TRKD **Charts** service and the TRKD **Charts Light** service.

Charts	Charts Light
To get a chart using the TRKD Charts service, you have to send two requests : 1. XML request with all required parameters. 2. HTTP GET request, using the URL received from the first request. Only after that a chart is returned to the client.	To get a chart using the TRKD Charts Light service, you have to build only one HTTP GET request with all required parameters.
To get a chart, you have to specify more than 50 required parameters.	To get a chart, you have to specify only one required parameter - RIC - all the other supported parameters are optional.
The list of parameters and parameter names do not completely correspond to the Reuters Investor service.	The list of parameters and parameter names almost completely correspond to the Reuters Investor service, so ex-users of RIS can easily start using the new TRKD service.
You can create more complex charts - with more than two sub-charts in one response.	Only two sub-charts can be returned in one response.
You can use Custom Time Series Data - a chart is created based on the data provided by the client.	No possibility to use custom data for creating charts.
The Charts service offers more parameters for visual customization of a chart (e.g. font styles for each label on the chart, position of axis, height of each sub-chart, etc.)	Fewer parameters for visual customization are available.
No templates are available.	About 20 predefined templates for visual customization are available in the Charts Light service.

9.1 Authentication and Authorization

Authorization

All requests to the TRKD API require an authorization token. For details, see section Understanding Authentication Tokens.

Authentication

TRKD API uses Reuters impersonation tokens for each effective user. In this case, Thomson Reuters must create each user before your application authenticates them. Unmanaged effective users are not supported in TRKD API.

For more information on creating a Service Token, see section Creating a Token.

9.2 Charts Light (GetChart_1)

The GetChart_1 is a special type of service. Requests to this service are made via HTTP GET, request parameters are passed in URL, and authentication information is passed in HTTP cookies. The service returns the content of the requested file as the response.

This example shows how to build a URL with the following parameters:

```

RIC = MCD and MSFT.O
Style = AbsCng
Days = 100
Vol = false

```



Http Sample Request

`http://api.rkd.reuters.com/api/ChartsLight/ChartsLight.svc/?appid=[AppID]&RIC=MCD|MSFT.O&style=AbsCng&days=100&vol=false&token=[Impersonation Token]`

Cookie: RkdAppId= [AppID]; RkdToken=[RkdToken]

To retrieve an image, build a URL in the address bar using the same parameters as in the Reuters Investor, TRKD Charts Service and TRKD Charts Web View (for details on their mapping, see the table). All of them are optional, except **appid**, **RIC**, and **token**. The separator character between parameters is ampersand (&).

To customize the retrieved chart image, change parameters directly in the URL.

Charts Light Attribute	Mapping to Reuters Investor	Mapping to TRKD Charts Service	Description
RIC	RIC	Envelope/Body/GetChart_Request_1/chartRequest/TimeSeries/TimeSeriesRequest/ Symbol	Several RICs can be specified in one request, separated by a vertical bar (). For example, RIC=IBM.N MSFT.O GOOG.O
style	STYLE	Envelope/Body/GetChart_Request_1/chartRequest/Analyses/Analysis/...(all types)	Shows what type of analysis should be applied to a particular RIC. Several styles can be specified, separated by a vertical bar (). For example, style=Mom AbsCng Candle. For a full list of supported styles see section Analyses List.
width	WIDTH	Attribute Width of <chartRequest> element	The width of the image in pixels.
height	HEIGHT	Attribute Height of <chartRequest> element	The height of the image in pixels.
imageType	ImageType	Attribute ImageType of <chartRequest> element	Supported types: PNG, BMP, JPEG, GIF, EMF.
days	DAYS	Envelope/Body/GetChart_Request_1/chartRequest/TimeSeries/TimeSeriesRequest/RequestRange/ Days	Number of business days ago. This parameter cannot be used together with maxpoints and startdate parameters.
maxpoints	MAXPOINTS	Envelope/Body/GetChart_Request_1/chartRequest/TimeSeries/TimeSeriesRequest/RequestRange/ Points	Maximum number of points to plot. Use this parameter to reduce clutter in small charts. This parameter cannot be used together with days and startdate parameters.
vol	VOL	Not applicable	If true, a second subchart (volume chart) will be displayed at the bottom.
close	CLOSE	Envelope/Body/GetChart_Request_1/chartRequest/Subchart/YAxis/Analysis/ LevelLines	If you want to display a horizontal line at the level of the last closing price, specify its placement. Example: close=10 15 20
allday	ALLDAY	Envelope/Body/GetChart_Request_1/chartRequest/StandardTemplate/ ShowNonTradedPeriods	Whether to show all values for the day (true) or only those within the exchange hours (false).
interval	INTERVAL	Envelope/Body/GetChart_Request_1/chartRequest/StandardTemplate/Interval/ Multiplier and Envelope/Body/GetChart_Request_1/chartRequest/StandardTemplate/Interval/ CommonType	Specify the interval in the following way: interval=CommonType Multiplier The following combinations are supported: Minutes 1; Minutes 5; Minutes 30; Hours 1; Days 1; Weeks 1; Months 1 Example: interval=days 10
allexchange ehourse	ALLEXCHANGE GEHOURSE	Envelope/Body/GetChart_Request_1/chartRequest/StandardTemplate/ ShowGaps	Scale X-axis to the exchange open period regardless of how much data is available. (true/false)
label	LABEL	Envelope/Body/GetChart_Request_1/chartRequest	You can hide or show the caption by



		/StandardTemplate/Title/Caption/ Visible	setting it to true or false.
labelorder	LABELORDER	Envelope/Body/GetChart_Request_1/chartRequest /StandardTemplate/Legend/ Information	You can choose to display the legend in one of the following three ways: long, short, minimum. This parameter will not be applied if the legend parameter is set to false.
value	VALUE	Envelope/Body/GetChart_Request_1/chartRequest /StandardTemplate/XAxis/ Visible	You can show or hide the X-Axis by setting this parameter to true or false.
fromdate	FROMDATE	Envelope/Body/GetChart_Request_1/chartRequest /StandardTemplate/XAxis/Range/Fixed/ First	Start date in any of the following formats: YYYY-MM-DDThh:mm:ss YYYY-MM YYYY-MM-DD YYYY/MM/DD YYYY.MM.DD MM/DD/YYYY DD.MM.YYYY DD-MM-YYYY hh:mm hh:mm:ss
todate	TODATE	Envelope/Body/GetChart_Request_1/chartRequest /StandardTemplate/XAxis/Range/Fixed/ Last	End date in any of the following formats: YYYY-MM-DDThh:mm:ss YYYY-MM YYYY-MM-DD YYYY/MM/DD YYYY.MM.DD MM/DD/YYYY DD.MM.YYYY DD-MM-YYYY hh:mm hh:mm:ss
bordercolor	BORDERCOLOR	Envelope/Body/GetChart_Request_1/chartRequest /Scheme/Border/Color/ RGB or Named or ARGB	Determine the color of the inner border. For example: RGB - 0;0;0 ARGB - 0;0;0;0 Named - Black, Blue, Red, etc. For details on color definitions, see section Colour Picker.
grid	GRID	Envelope/Body/GetChart_Request_1/chartRequest /StandardTemplate/ GridLines	Whether or not to show the grid: Vertical, Horizontal, Both, None (by default).
gridcolor	GRIDCOLOR	Envelope/Body/GetChart_Request_1/chartRequest /Scheme/GridLines/Color/ RGB or Named or ARGB	The color of the grid lines. For example: RGB - 0;0;0 ARGB - 0;0;0;0 Named - Black, Blue, Red, etc.
gridstyle	GRIDDOTTED	Envelope/Body/GetChart_Request_1/chartRequest /Scheme/GridLines/ DashStyle	Determine the style of grid lines: Solid, Dash, DashDot, DashDotDot, Dot.
textcolor	TEXTCOLOR	Envelope/Body/GetChart_Request_1/chartRequest /Scheme/Title/Caption/Color/ Named or RGB or ARGB Envelope/Body/GetChart_Request_1/chartRequest /Scheme/Title/Range/Color/ Named or RGB or ARGB Envelope/Body/GetChart_Request_1/chartRequest /Scheme/Legend/Color/ Named or RGB or ARGB	Color of labels only. For example: RGB - 0;0;0 ARGB - 0;0;0;0 Named - Black, Blue, Red, etc.
valuecolor	VALUECOLOR	Envelope/Body/GetChart_Request_1/chartRequest /Scheme/XAxis/Major/Color/ Named or RGB or ARGB	Color of axis values. For example:



		Envelope/Body/GetChart_Request_1/chartRequest /Scheme/XAxis/Minor/Color/ Named or RGB or ARGB Envelope/Body/GetChart_Request_1/chartRequest /Scheme/YAxis/Major/Color/ Named or RGB or ARGB Envelope/Body/GetChart_Request_1/chartRequest /Scheme/YAxis/Minor/Color/ Named or RGB or ARGB Envelope/Body/GetChart_Request_1/chartRequest /Scheme/YAxis/Title/Color/ Named or RGB or ARGB	RGB - 0;0;0 ARGB - 0;0;0;0 Named - Black, Blue, Red, etc.
font	FONT	Envelope/Body/GetChart_Request_1/chartRequest /Scheme/ Title/Caption/Family + Style Envelope/Body/GetChart_Request_1/chartRequest /Scheme/ Title/Range/Family + Style Envelope/Body/GetChart_Request_1/chartRequest /Scheme/ XAxis/Major/Family + Style Envelope/Body/GetChart_Request_1/chartRequest /Scheme/ XAxis/Minor/Family + Style Envelope/Body/GetChart_Request_1/chartRequest /Scheme/ YAxis/Major/Family + Style Envelope/Body/GetChart_Request_1/chartRequest /Scheme/ YAxis/Minor/Family + Style Envelope/Body/GetChart_Request_1/chartRequest /Scheme/ YAxis/Title/Family + Style Envelope/Body/GetChart_Request_1/chartRequest /Scheme/ Legend/ Family + Style	Choose a font to use. Integer from 0 to 10: SmallFont = 0 Arial = 1 ArialBold = 2 GaramondBold = 3 CourierBold = 4 Verdana = 5 VerdanaBold = 6 Times = 7 TimesBold = 8 Tahoma = 9 TahomaBold = 10
linecolor	LINECOLOR	Envelope/Body/GetChart_Request_1/chartRequest /Scheme/Series/ Color/Named or RGB or ARGB	Color of chart line for all styles. Several values can be applied. For example: RGB - 0;0;0 ARGB - 0;0;0;0 Named - Black, Blue, Red, etc.
linesize	LINESIZE	Envelope/Body/GetChart_Request_1/chartRequest /Scheme/Series/ Width	Width in pixels of chart line. Several values can be applied.
area	AREA	Envelope/Body/GetChart_Request_1/chartRequest /Analyses/Analysis/[type_of_analysis]/ Series1/Name	Whether to fill the area under the plotted line. Several values can be applied: FilledLine, FilledSpline, FilledStepped. This parameter can be used for all styles except HL, HLC, OHLC, Candle.
areacolor	AREACOLOR	Envelope/Body/GetChart_Request_1/chartRequest /Scheme/Series/ FillColor/Named or RGB or ARGB	Color of filled area under a line chart for all styles of analysis. For example: RGB - 0;0;0 ARGB - 0;0;0;0 Named - Black, Blue, Red, etc. This parameter can be specified only if the area parameter is used. Several values can be applied.
volcolor	VOLUMECOLOR	Envelope/Body/GetChart_Request_1/chartRequest /Scheme/Series/ Color/Named or RGB or ARGB	Color of all volume bars on a second subchart. For example: RGB - 0;0;0 ARGB - 0;0;0;0 Named - Black, Blue, Red, etc. This parameter will not be applied if the vol parameter is set to false.
fillcolor	FILLCOLOR	Envelope/Body/GetChart_Request_1/chartRequest /Scheme/Background/ Start Color (Named or RGB or ARGB) and	Color of the inner chart area (background). For example: RGB - 0;0;0



		Envelope/Body/GetChart_Request_1/chartRequest /Scheme/Background/ BackgroundMode (Solid)	ARGB - 0;0;0;0 Named - Black, Blue, Red, etc. This parameter cannot be used together with startcolor, bgstyle and gradientstyle parameters.
gradientstyle	Not applicable	Envelope/Body/GetChart_Request_1/chartRequest /Scheme/ Background/GradientMode	Determine the style of background gradient: Horizontal Vertical ForwardDiagonal (by default) BackwardDiagonal HorizontalCycle VerticalCycle ForwardDiagonalCycle BackwardDiagonalCycle This parameter will not be applied if the gradient parameter is set to false. This parameter cannot be used together with fillcolor and bgstyle parameters.
borderwidth	Not applicable	Envelope/Body/GetChart_Request_1/chartRequest /Scheme/Border/ Width	The width of inner border in pixels.
startdate	Not applicable	Envelope/Body/GetChart_Request_1/chartRequest /TimeSeries/TimeSeriesRequest/RequestRange/ StartDate	Start date in any of the following formats: YYYY-MM-DDThh:mm:ss YYYY-MM YYYY-MM-DD YYYY/MM/DD YYYY.MM.DD MM/DD/YYYY DD.MM.YYYY DD-MM-YYYY hh:mm hh:mm:ss This parameter cannot be used together with days and maxpoints parameters.
enddate	Not applicable	Envelope/Body/GetChart_Request_1/chartRequest /TimeSeries/TimeSeriesRequest/RequestRange/ EndDate	End date in any of the following formats: YYYY-MM-DDThh:mm:ss YYYY-MM YYYY-MM-DD YYYY/MM/DD YYYY.MM.DD MM/DD/YYYY DD.MM.YYYY DD-MM-YYYY hh:mm hh:mm:ss This parameter can be applied only with one of the following parameters: maxpoints, days, startdate.
culture	Not applicable	Attribute Culture of <chartRequest> element.	Specify what locale and language you would like the chart to adopt. This parameter affects such settings like the language used for text labels, date format, decimal separators, etc.
borderstyle	Not applicable	Envelope/Body/GetChart_Request_1/chartRequest /Scheme/ Border/DashStyle	Determine the style of inner border: Solid, Dash, DashDot, DashDotDot, Dot.
fontsize	Not	Envelope/Body/GetChart_Request_1/chartRequest	This parameter is applied if other font



	applicable	/Scheme/ Title/Caption/[Size] Envelope/Body/GetChart_Request_1/chartRequest /Scheme/ Title/Range/[Size] Envelope/Body/GetChart_Request_1/chartRequest /Scheme/ XAxis/Major/[Size] Envelope/Body/GetChart_Request_1/chartRequest /Scheme/ XAxis/Minor/[Size] Envelope/Body/GetChart_Request_1/chartRequest /Scheme/ YAxis/Major/[Size] Envelope/Body/GetChart_Request_1/chartRequest /Scheme/ YAxis/Minor/[Size] Envelope/Body/GetChart_Request_1/chartRequest /Scheme/ YAxis/Title/[Size] Envelope/Body/GetChart_Request_1/chartRequest /Scheme/ Legend/[Size]	sizes are not used.
fontsize_title	Not applicable	Envelope/Body/GetChart_Request_1/chartRequest /Scheme/ Title/Caption/[Size]	Overwrites the value of the fontsize parameter.
fontsize_ytitle	Not applicable	Envelope/Body/GetChart_Request_1/chartRequest /Scheme/ YAxis/Title/[Size]	Overwrites the value of the fontsize parameter.
fontsize_xmajor	Not applicable	Envelope/Body/GetChart_Request_1/chartRequest /Scheme/ XAxis/Major/[Size]	Overwrites the value of the fontsize parameter.
fontsize_ymajor	Not applicable	Envelope/Body/GetChart_Request_1/chartRequest /Scheme/ YAxis/Major/[Size]	Overwrites the value of the fontsize parameter.
fontsize_xminor	Not applicable	Envelope/Body/GetChart_Request_1/chartRequest /Scheme/ XAxis/Minor/[Size]	Overwrites the value of the fontsize parameter.
fontsize_yminor	Not applicable	Envelope/Body/GetChart_Request_1/chartRequest /Scheme/ YAxis/Minor/[Size]	Overwrites the value of the fontsize parameter.
fontsize_legend	Not applicable	Envelope/Body/GetChart_Request_1/chartRequest /Scheme/ Legend/[Size]	Overwrites the value of the fontsize parameter. This parameter will not be applied if the legend parameter is set to false.
gradient	Not applicable	Envelope/Body/GetChart_Request_1/chartRequest /Scheme/ Background/BackgroundMode	Determine whether gradient should be applied to the chart background (true/false).
startcolor	Not applicable	Envelope/Body/GetChart_Request_1/chartRequest /Scheme/ Background/StartColor (Named or RGB or ARGB)	Start color for the gradient and background style. For example: RGB - 0;0;0 ARGB - 0;0;0;0 Named - Black, Blue, Red, etc. This parameter cannot be used together with fillcolor parameter.
endcolor	Not applicable	Envelope/Body/GetChart_Request_1/chartRequest /Scheme/ Background/EndColor (Named or RGB or ARGB)	End color for the gradient and background style. For example: RGB - 0;0;0 ARGB - 0;0;0;0 Named - Black, Blue, Red, etc.
vol_linesize	Not applicable	Envelope/Body/GetChart_Request_1/chartRequest /Scheme/ Series/Width	The width of lines for a second subchart (Vol analysis). This parameter will not be applied if the vol parameter is set to false.
title	Not applicable	Envelope/Body/GetChart_Request_1/chartRequest /StandardTemplate/ Title/CustomizedText	The chart title.
titles	Not applicable	Envelope/Body/GetChart_Request_1/chartRequest /StandardTemplate/ YAxisTitles	Several titles can be applied to Y-axis: None, Type, Currency, Unit, DisplayUnit, All.
legend	Not applicable	Envelope/Body/GetChart_Request_1/chartRequest	Determine whether legend should be



	applicable	/StandardTemplate/ Legend/Visible	displayed (true/false).
legendpos	Not applicable	Envelope/Body/GetChart_Request_1/chartRequest /StandardTemplate/ Legend/Position	Determine the legend position on the chart: Above, Below, Overlaid. This parameter will not be applied if the legend parameter is set to false.
legendstyle	Not applicable	Envelope/Body/GetChart_Request_1/chartRequest /StandardTemplate/ Legend/Layout	Determine the style of the legend: MultiLine, SingleLine, WrappedLine. This parameter will not be applied if the legend parameter is set to false.
instrument	Not applicable	Envelope/Body/GetChart_Request_1/chartRequest /StandardTemplate/ Instrument	Determine the kind of RIC naming on the chart: Symbol, FeedSymbol, Name.
bgstyle	Not applicable	Envelope/Body/GetChart_Request_1/chartRequest /Scheme/Background/ HatchStyle	Determine the style of chart background. This parameter cannot be used together with fillcolor and gradientstyle parameters.
gridwidth	Not applicable	Envelope/Body/GetChart_Request_1/chartRequest /Scheme/ GridLines/Width	The width of grid lines.
showyaxis	Not applicable	Envelope/Body/GetChart_Request_1/chartRequest /StandardTemplate/ Subchart/Yaxis/Visible	Determine whether the Y-axis should be displayed (true/false).
showrange	Not applicable	Envelope/Body/GetChart_Request_1/chartRequest /StandardTemplate/ Title/Range/Visible	Determine whether the title range should be displayed (true/false).
id	Not applicable	Not applicable	If you want to apply a predefined template, specify its id (from 1 to 21). You can find the list of available skins in section Chart Skins. To overwrite template values, specify the same parameters with different values in the URL.
templateId	Not applicable	Not applicable	If you want to apply a custom template that you created using the Charts Light Template service, specify its id.

Note. For details on color definitions, see section Colour Picker.



chapter 10 Charts Light Template

The Charts Light Template service allows users to store their custom templates in Thomson Reuters database, and to apply them to the Charts Light service. These templates may be retrieved at any time by their ID, so you won't have to specify the parameters once again.

By using this service you can create, delete, retrieve and update a template.

The following operations are available:

- Create Charts Light Template (CreateChartsLightTemplate_1) - creates a template.
- Delete Charts Light Template (DeleteChartsLightTemplate_1) - deletes a template.
- Get Charts Light Template By Id (GetChartsLightTemplateById_1) - retrieves a template by its ID.
- Get Charts Light Templates (GetChartsLightTemplates_1) - retrieves all templates created by the user.
- Update Charts Light Template (UpdateChartsLightTemplate_1) - updates a template by its ID.

10.1 Authentication/Authorization, Service Endpoint, and Required Headers

Authorization

All requests to Charts Light Template service require an authorization token. For details, see section Understanding Authentication Tokens.

Authentication

Charts Light Template uses Reuters impersonation tokens for each effective user. In this case, Thomson Reuters must create each user before your application authenticates them. Unmanaged effective users are not supported in Charts Light Template.

For additional information on creating a Service Token, see section Creating a Token.

Service Endpoint

Charts Light Template Endpoint

<http://api.rkd.reuters.com/api/ChartsLightTemplate/ChartsLightTemplate.svc>

Required Header

Required HTTP Headers

POST /api/ChartsLightTemplate/ChartsLightTemplate.svc HTTP/1.1
 Content-Type: application/soap+xml
 Host: api.rkd.reuters.com
 Content-Length: [length]

10.2 WSDL

WSDL:

http://api.rkd.reuters.com/schemas/ChartsLightTemplate/wsd/ChartsLightTemplate_1_HttpAndRKDToken.wsdl

10.3 Create Charts Light Template

The CreateChartsLightTemplate_1 operation is used to create a chart template.

The following example shows how to create a template.

XML Sample Request - Create Charts Light Template

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/ChartsLightTemplate/ChartsLightTemplate.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2012/05/07/webservices/rkd/ChartsLightTemplate_1/CreateChartsLightTemplate_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <CreateChartsLightTemplate_Request_1 xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://www.reuters.com/ns/2012/06/06/webservices/rkd/ChartsLightTemplate_1">
      <ChartsLightTemplate imageType="PNG" height="150" width="200">
        <StandardTemplate allday="false" allexchangehour="true" titles="Currency Type" grid="Both" value="true" instrument="Symbol" vol="false" labelorder="Short" label="true">
          <Title>
            <Range showrange="true" />
          </Title>
          <Interval type="Hours" multiplier="1" />
          <VisualSettings gradientstyle="ForwardDiagonal" bgstyle="LargeGrid" gradient="true" fontsize="8" font="1">
            <ValueColor>
              <RGB>50;50;50</RGB>
            </ValueColor>
            <TextColor>
              <RGB>50;50;50</RGB>
            </TextColor>
            <VolColor>
              <RGB>0;51;255</RGB>
            </VolColor>
            <FillColor>
              <RGB>0;0;0</RGB>
            </FillColor>
            <StartColor>
              <RGB>255;255;255</RGB>
            </StartColor>
            <EndColor>
              <RGB>255;255;255</RGB>
            </EndColor>
            <Border width="1" style="Solid">
              <color>
                <RGB>139;139;155</RGB>
              </color>
            </Border>
            <Grid width="1" style="Dot">
              <color>
                <RGB>139;139;155</RGB>
              </color>
            </Grid>
            <Legend value="true" />
          </VisualSettings>
        </StandardTemplate>
        <Analyses>
          <Analysis type="Line" />
        </Analyses>
        <SchemeSeries>
          <LineItem size="0">
            <LineItemColor>
              <RGB>0;102;204</RGB>
            </LineItemColor>
          </LineItem>
          <LineItem size="0">
            <LineItemColor>
              <RGB>207;47;10</RGB>
            </LineItemColor>
          </LineItem>
          <LineItem size="0">
            <LineItemColor>
              <RGB>105;105;105</RGB>
            </LineItemColor>
          </LineItem>
        </SchemeSeries>
      </ChartsLightTemplate>
    </CreateChartsLightTemplate_Request_1>
  </Body>
</Envelope>

```




```

</LineItem>
...
</SchemeSeries>
</ChartsLightTemplate>
</CreateChartsLightTemplate_Request_1>

</Body>
</Envelope>

```

The following parameters can be specified in the request:

Parameter	Description
width	The width of the image in pixels.
height	The height of the image in pixels.
imageType	Defines image type. Supported types: PNG, BMP, JPEG, GIF, EMF.
Analysis	The type attribute of this element shows what type of analysis should be applied to a particular RIC. Several styles can be specified. For a full list of supported styles see section Analyses List.
LineItemColor	Color of a chart line for all styles. Several values can be applied. For example: RGB - 0;0;0 ARGB - 0;0;0;0 Named - Black, Blue, Red, etc.
LineItem	The size attribute defines width in pixels of a chart line. Integer [1-5].
titles	Specifies title(s) for Y axis. Possible values: None, Type, Currency, Unit, DisplayUnit, All. You can provide multiple values separated by a space.
vol	Defines whether or not to show a volume chart at the bottom.
showrange	Defines whether to show the time period range.
interval	Specifies the data intervals. Contains the following attributes: type - specifies the type of the interval. The choices are: - Minutes - Hours - Days - Weeks - Months multiplier - the interval of the unit defined in the type attribute.
labelorder	You can choose to display the legend in one of the following three ways: long, short, minimum. This parameter will not be applied if the legend parameter is set to false.
allexchangehours	Scale X-axis to the exchange open period regardless of how much data is available. (true/false)
label	You can hide or show the caption by setting it to true or false.
value	You can show or hide the X-Axis by setting this parameter to true or false.
instrument	Determine the kind of RIC naming on the chart: Symbol, FeedSymbol, Name.
grid	Type of grid to be shown: Vertical, Horizontal, Both, None.
allday	Whether to show all values for the day (true) or only those within the exchange hours (false).
ValueColor	Color of axis values. For example: RGB - 0;0;0 ARGB - 0;0;0;0 Named - Black, Blue, Red, etc.
TextColor	Color of labels only. For example: RGB - 0;0;0 ARGB - 0;0;0;0 Named - Black, Blue, Red, etc.
VolColor	Color of all volume bars on a second subchart. For example: RGB - 0;0;0 ARGB - 0;0;0;0 Named - Black, Blue, Red, etc.



	This parameter will not be applied if the vol parameter is set to false.
FillColor	Color of the inner chart area (background). For example: RGB - 0;0;0 ARGB - 0;0;0;0 Named - Black, Blue, Red, etc. This parameter cannot be used together with startcolor , bgstyle and gradientstyle parameters.
StartColor	Start color for the gradient and background style. For example: RGB - 0;0;0 ARGB - 0;0;0;0 Named - Black, Blue, Red, etc. This parameter cannot be used together with fillcolor parameter.
EndColor	End color for the gradient and background style. For example: RGB - 0;0;0 ARGB - 0;0;0;0 Named - Black, Blue, Red, etc.
Legend	Determine whether legend should be displayed (true/false).
gradient	Determine whether gradient should be applied to the chart background (true/false).
bgstyle	Determine the style of chart background. This parameter cannot be used together with fillcolor and gradientstyle parameters.
gradientstyle	Determine the style of background gradient: Horizontal Vertical ForwardDiagonal (by default) BackwardDiagonal HorizontalCycle VerticalCycle ForwardDiagonalCycle BackwardDiagonalCycle This parameter will not be applied if the gradient parameter is set to false. This parameter cannot be used together with fillcolor and bgstyle parameters.
font	Choose a font to use. Integer from 0 to 10: SmallFont = 0 Arial = 1 ArialBold = 2 GaramondBold = 3 CourierBold = 4 Verdana = 5 VerdanaBold = 6 Times = 7 TimesBold = 8 Tahoma = 9 TahomaBold = 10
fontsize	Defines font size for the font used in the chart.
Border	Has the following attributes: • color - Defines color of outer frame, in red-green-blue 6-digit hexadecimal. • style - Defines the style of inner border: Solid, Dash, DashDot, DashDotDot, Dot. • width - Defines width of border.
Grid	Has the following attributes: • color - The color of the grid lines, in red-green-blue 6-digit hexadecimal. • style - Defines grid style: Solid, Dash, DashDot, DashDotDot, Dot. • width - Defines the width of the grid.

The response returns a template ID, which you can apply in the Charts Light service. Note that you will have access only to templates that you created yourself.

XML Sample Response - Create Charts Light Template

```
<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
```



```

<s:Header>
  <a:Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2012/05/07/webservices/
  rkd/ChartsLightTemplate_1/CreateChartsLightTemplate_1_Reply
  </a:Action>
  <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
</s:Header>
<s:Body>
  <CreateChartsLightTemplate_Response_1 xmlns="http://www.reuters.com/ns/2012/06/06/webservices/rkd/ChartsLightTemplate_1">
    <templateId>1305297</templateId>
  </CreateChartsLightTemplate_Response_1>
</Body>
</Envelope>

```

10.4 Delete Charts Light Template

The DeleteChartsLightTemplate_1 operation deletes a template with the ID provided by the user. Note that you will have access only to templates that you created yourself.

The following example deletes template with ID 1305297:

XML Sample Request - Delete Charts Light Template

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/ChartsLightTemplate/ChartsLightTemplate.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2012/05/07/webservices/rkd/
    ChartsLightTemplate_1/DeleteChartsLightTemplate_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <DeleteChartsLightTemplate_Request_1 xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/
    XMLSchema-instance" xmlns="http://www.reuters.com/ns/2012/06/06/webservices/rkd/ChartsLightTemplate_1">
      <templateId>1305297</templateId>
    </DeleteChartsLightTemplate_Request_1>
  </Body>
</Envelope>

```

After you submit the request, a message will appear, saying that the Charts Light template was deleted successfully.

10.5 Get Charts Light Template By Id

The GetChartsLightTemplateById_1 operation retrieves a template by its ID. Note that you will have access only to templates that you created yourself.

The following example retrieves the template with ID 1305335:

XML Sample Request - Get Charts Light Template By Id

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/ChartsLightTemplate/ChartsLightTemplate.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2012/05/07/webservices/rkd/
    ChartsLightTemplate_1/GetChartsLightTemplateById_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>

```



```

<GetChartsLightTemplateById_Request_1 xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/
XMLSchema-instance" xmlns="http://www.reuters.com/ns/2012/06/06/webservices/rkd/ChartsLightTemplate_1">
  <templateId>1305335</templateId>
</GetChartsLightTemplateById_Request_1>

</Body>
</Envelope>

```

The response returns information about the template:

XML Sample Response - Get Charts Light Template By Id

```

<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2012/05/07/webservices/
rkd/ChartsLightTemplate_1/GetChartsLightTemplateById_1_Reply
    </a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </s:Header>
  <s:Body>
    <GetChartsLightTemplateById_Response_1 xmlns="http://www.reuters.com/ns/2012/06/06/webservices/rkd/ChartsLightTemplate_1">
      <ChartsLightTemplate templateId="1305335" width="200" height="150" imageType="PNG">
        <StandardTemplate vol="false" label="true" labelorder="Short" value="true" allexchangehourse="true" allday="false" grid="Both"
instrument="Symbol" titles="Currency Type">
          <Title>
            <Range showrange="true"></Range>
          </Title>
          <Interval type="Hours" multiplier="1"></Interval>
          <VisualSettings fontsize="8" font="1" gradient="true" gradientstyle="ForwardDiagonal" bgstyle="LargeGrid">
            <ValueColor>
              <RGB>50;50;50</RGB>
            </ValueColor>
            <TextColor>
              <RGB>50;50;50</RGB>
            </TextColor>
            <VolColor>
              <RGB>0;51;255</RGB>
            </VolColor>
            <FillColor>
              <RGB>0;0;0</RGB>
            </FillColor>
            <StartColor>
              <RGB>255;255;255</RGB>
            </StartColor>
            <EndColor>
              <RGB>255;255;255</RGB>
            </EndColor>
            <Border style="Solid" width="1">
              <color>
                <RGB>139;139;155</RGB>
              </color>
            </Border>
            <Grid width="1" style="Dot">
              <color>
                <RGB>139;139;155</RGB>
              </color>
            </Grid>
            <Legend value="true"></Legend>
          </VisualSettings>
        </StandardTemplate>
        <Analyses>
          <Analysis type="Line"></Analysis>
        </Analyses>
        <SchemeSeries>
          <LineItem size="0">
            <LineItemColor>
              <RGB>0;102;204</RGB>
            </LineItemColor>
          </LineItem>
          ...
        </SchemeSeries>
      </ChartsLightTemplate>
    </GetChartsLightTemplateById_Response_1>
  </s:Body>
</Envelope>

```



```
</Body>
</Envelope>
```

10.6 Get Charts Light Templates

The GetChartsLightTemplates_1 operation retrieves all templates created by the user. No input parameters are required.

The following example retrieves Charts Light templates.

XML Sample Request - Get Charts Light Templates

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/ChartsLightTemplate/ChartsLightTemplate.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2012/05/07/webservices/rkd/
ChartsLightTemplate_1/GetChartsLightTemplates_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetChartsLightTemplates_Request_1 xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/
XMLSchema-instance" xmlns="http://www.reuters.com/ns/2012/06/06/webservices/rkd/ChartsLightTemplate_1" />
  </Body>
</Envelope>
```

The response contains information about all templates created by the user.

XML Sample Response - Get Charts Light Templates

```
<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2012/05/07/webservices/
rkd/ChartsLightTemplate_1/GetChartsLightTemplates_1_Reply
    </a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </s:Header>
  <s:Body>
    <GetChartsLightTemplates_Response_1 xmlns="http://www.reuters.com/ns/2012/06/06/webservices/rkd/ChartsLightTemplate_1">
      <ChartsLightTemplate templateId="1304200" width="400" height="350" imageType="BMP">
        <StandardTemplate vol="true" label="true" labelorder="Long" value="true" allexchangehourse="true" allday="true" grid="Both"
instrument="FeedSymbol" titles="Type Currency">
          <Title>
            <Range showrange="true"></Range>
          </Title>
          <Interval type="Days" multiplier="1"></Interval>
          <VisualSettings fontsize="9" font="1" gradient="true" gradientstyle="Horizontal" bgstyle="Vertical">
            <ValueColor>
              <RGB>51;0;255</RGB>
            </ValueColor>
            <TextColor>
              <RGB>0;0;0</RGB>
            </TextColor>
            <VolColor>
              <RGB>102;153;0</RGB>
            </VolColor>
            <FillColor>
              <RGB>255;255;51</RGB>
            </FillColor>
            <StartColor>
              <RGB>0;0;0</RGB>
            </StartColor>
            <EndColor>
              <RGB>102;0;204</RGB>
            </EndColor>
          </VisualSettings>
        </StandardTemplate>
      </ChartsLightTemplate>
    </GetChartsLightTemplates_Response_1>
  </s:Body>
</s:Envelope>
```



```

        </EndColor>
        <Border style="DashDotDot" width="2">
          <color>
            <RGB>102;204;51</RGB>
          </color>
        </Border>
        <Grid width="2" style="DashDot">
          <color>
            <RGB>255;204;0</RGB>
          </color>
        </Grid>
        <Legend value="true"></Legend>
      </VisualSettings>
    </StandardTemplate>
    <Analyses>
      <Analysis type="MACDF"></Analysis>
    </Analyses>
    <SchemeSeries>
      <LineItem size="2">
        <LineItemColor>
          <RGB>0;255;51</RGB>
        </LineItemColor>
      </LineItem>
    </SchemeSeries>
  </ChartsLightTemplate>
  <ChartsLightTemplate templateId="1304624" width="600" height="500" imageType="PNG">
    <StandardTemplate vol="false" label="true" labelorder="Short" value="true" allexchangehourse="true" allday="false" grid="Both"
    instrument="Symbol" titles="Currency Type">
      <Title>
        <Range showrange="true"></Range>
      </Title>
      <Interval type="Hours" multiplier="1"></Interval>
      <VisualSettings fontsize="56" font="1" gradient="true" gradientstyle="ForwardDiagonal" bgstyle="LargeGrid">
        <ValueColor>
          <RGB>50;50;50</RGB>
        </ValueColor>
        <TextColor>
          <RGB>50;50;50</RGB>
        </TextColor>
        <VolColor>
          <RGB>0;51;255</RGB>
        </VolColor>
        <FillColor>
          <RGB>0;0;0</RGB>
        </FillColor>
        <StartColor>
          <RGB>255;255;255</RGB>
        </StartColor>
        <EndColor>
          <RGB>255;255;255</RGB>
        </EndColor>
        <Border style="Solid" width="1">
          <color>
            <RGB>139;139;155</RGB>
          </color>
        </Border>
        <Grid width="1" style="Dot">
          <color>
            <RGB>139;139;155</RGB>
          </color>
        </Grid>
        <Legend value="true"></Legend>
      </VisualSettings>
    </StandardTemplate>
    <Analyses>
      <Analysis type="Line"></Analysis>
    </Analyses>
    <SchemeSeries>
      <LineItem size="0">
        <LineItemColor>
          <RGB>0;102;204</RGB>
        </LineItemColor>
      </LineItem>
      ...
    </SchemeSeries>
  </ChartsLightTemplate>

```



```

</ChartsLightTemplate>
<ChartsLightTemplate templateId="1305335" width="200" height="150" imageType="PNG">
  <StandardTemplate vol="false" label="true" labelorder="Short" value="true" allexchangehourse="true" allday="false" grid="Both"
instrument="Symbol" titles="Currency Type">
    <Title>
      <Range showrange="true"></Range>
    </Title>
    <Interval type="Hours" multiplier="1"></Interval>
    <VisualSettings fontsize="8" font="1" gradient="true" gradientstyle="ForwardDiagonal" bgstyle="LargeGrid">
      ...
    </VisualSettings>
  </StandardTemplate>
</Analyses>
  <Analysis type="Line"></Analysis>
</Analyses>
<SchemeSeries>
  ...
</SchemeSeries>
</ChartsLightTemplate>
</GetChartsLightTemplates_Response_1>
</Body>
</Envelope>

```

10.7 Update Charts Light Template

The UpdateChartsLightTemplate_1 operation updates a template by its ID.

The following example updates the template with ID 1304200:

XML Sample Request - Update Charts Light Template

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/ChartsLightTemplate/ChartsLightTemplate.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2012/05/07/webservices/rkd/
ChartsLightTemplate_1/UpdateChartsLightTemplate_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <UpdateChartsLightTemplate_Request_1 xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/
XMLSchema-instance" xmlns="http://www.reuters.com/ns/2012/06/06/webservices/rkd/ChartsLightTemplate_1">
      <ChartsLightTemplate imageType="PNG" height="450" width="500" templateId="1304200">
        <StandardTemplate allday="true" allexchangehourse="true" grid="Horizontal" value="true" instrument="FeedSymbol" vol="true"
labelorder="Long" label="true">
          <Title>
            <Range showrange="true" />
          </Title>
          <Interval type="Hours" multiplier="1" />
          <VisualSettings gradientstyle="Horizontal" bgstyle="Vertical" gradient="true" fontsize="9" font="1">
            <ValueColor>
              <RGB>0;0;0</RGB>
            </ValueColor>
            <TextColor>
              <RGB>0;0;0</RGB>
            </TextColor>
            <VolColor>
              <RGB>0;0;0</RGB>
            </VolColor>
            <FillColor>
              <RGB>255;255;255</RGB>
            </FillColor>
            <StartColor>
              <RGB>255;255;255</RGB>
            </StartColor>
          </VisualSettings>
        </StandardTemplate>
      </ChartsLightTemplate>
    </UpdateChartsLightTemplate_Request_1>
  </Body>
</Envelope>

```



```

    <EndColor>
      <RGB>255;255;255</RGB>
    </EndColor>
    <Border width="2" style="Solid">
      <color>
        <RGB>0;0;0</RGB>
      </color>
    </Border>
    <Grid width="2" style="Dash">
      <color>
        <RGB>0;0;0</RGB>
      </color>
    </Grid>
    <Legend value="true" />
  </VisualSettings>
</StandardTemplate>
<Analyses>
  <Analysis type="MACDF" />
</Analyses>
<SchemeSeries>
  <LineItem size="3">
    <LineItemColor>
      <RGB>0;0;0</RGB>
    </LineItemColor>
  </LineItem>
</SchemeSeries>
</ChartsLightTemplate>
</UpdateChartsLightTemplate_Request_1>

</Body>
</Envelope>

```

After you submit the request, a message will appear, saying that the Charts Light template was updated successfully.



chapter 11 Company Administration

The Company Administration service can be used to retrieve and update company and channel information from the MxPDB database. It is one of the APIs used by the Multex Permissioning Database Front-End System (MDBS) to manage company information.

The following operations are available through Company Administration:

- **Company from Template** (CompanyFromTemplate_1) - creates a company from a template.
- **Get Channel Reference Information** (GetChannelReferenceInfo_1) - retrieves reference information of all the available channels.
- **Get Company Template** (GetCompanyTemplate_1) - retrieves the list of country codes.
- **Update Company** (UpdateCompany_1) - updates the properties of a particular company.

11.1 Authentication/Authorization, Service Endpoint, and Required Headers

Authorization

All requests to the Company Administration service require an authorization token. For details, see section Understanding Authentication Tokens.

Authentication

The Company Administration service uses Reuters impersonation tokens for each effective user. In this case, Thomson Reuters must create each user before your application authenticates them. Unmanaged effective users are not supported in Company Administration.

For additional information on creating a Service Token, see section Creating a Token.

Service Endpoint

Company Administration Endpoint

<http://api.rkd.reuters.com/api/CompanyAdmin/CompanyAdmin.svc>

Required Header

Required HTTP Headers

POST api/CompanyAdmin/CompanyAdmin.svc HTTP/1.1
Content-Type: application/soap+xml
Host: api.rkd.reuters.com
Content-Length: [length]

11.2 WSDL

WSDL:

http://api.rkd.reuters.com/schemas/CompanyAdmin/wsdl/CompanyAdmin_1_HttpAndRKDTOKEN.wsdl

11.3 Company from Template (CompanyFromTemplate_1)

The CompanyFromTemplate_1 request creates a company from a template. Templates are used to describe the database object patterns to instantiate a new company within the database.

The following example creates a company with company name 'New_Company' and Template ID '30530'. It also requires the mailing address, city, state, postal code, and country.

Note: When specifying country name, make sure you use the proper country code. See section Country Codes for mapping.

XML Sample Request - Creating Company from Template

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/CompanyAdmin/CompanyAdmin.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/08/08/webservices/rkd/
    CompanyAdmin_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <CompanyFromTemplate_Request_1 xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/CompanyAdmin_1">
      <input>
        <companyName>New_Company</companyName>
        <description>CompanyAdmin_service test company</description>
        <templateid>30530</templateid>
        <companyMailingAddress>
          <AddressLine1>Mailing Address_Line1</AddressLine1>
          <City>City_Name</City>
          <StateProvince>State_Name</StateProvince>
          <Country>Country_Name</Country>
        </companyMailingAddress>
      </input>
    </CompanyFromTemplate_Request_1>
  </Body>
</Envelope>
```

Attribute	Description
companyName	Name for the company to be created. Note: The value for this attribute is limited to 64 characters max.
description	Provides company description. Note: The value for this attribute is limited to 255 characters max.
templateid	Defines template id used by the company (mandatory input parameter).
companyMailingAddress	Defines company's mailing address.

The response returns ID of the created company.

Note: Keep in mind that to update the company, this id is required on the input.

XML Sample Response - Creating Company from Template

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/08/08/webservices/
    rkd/CompanyAdmin_1/CompanyFromTemplate_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <CompanyFromTemplate_Response_1 xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/CompanyAdmin_1">
      <companyId>184</companyId>
    </CompanyFromTemplate_Response_1>
  </Body>
</Envelope>
```



11.4 Get Channel Reference Information (GetChannelReferenceInfo_1)

The GetChannelReferenceInfo_1 request can be used to retrieve a list of the country codes for use when creating a new entitlement entity. See section Country Codes for mapping.

The following request is an example of the GetChannelReferenceInfo_1 request:

XML Sample Request - Retrieving Channel Reference Information

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/CompanyAdmin/CompanyAdmin.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/08/08/webservices/rkd/CompanyAdmin_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetChannelReferenceInfo_Request_1 xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/CompanyAdmin_1">
      <channelReferenceInfoOutputFilter country="true" userJobFunction="false"/>
    </GetChannelReferenceInfo_Request_1>
  </Body>
</Envelope>
```

Attribute	Description
country	Defines whether to include country code in the response.
userJobFunction	Defines whether to include user's job function code in the response. See section User Job Roles for mapping.

The response returns the following information:

XML Sample Response - Retrieving Channel Reference Information

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/08/08/webservices/rkd/CompanyAdmin_1/CompanyFromTemplate_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <GetChannelReferenceInfo_Response_1 xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/CompanyAdmin_1">
      <channelRef>
        <country>
          <id>US</id>
          <name>United States of America</name>
        </country>
        <country>
          <id>UK</id>
          <name>United Kingdom</name>
        </country>
      </channelRef>
    </GetChannelReferenceInfo_Response_1>
  </Body>
</Envelope>
```

Attribute	Description
country id	Shows the country code.
country name	Shows country name.
userJobFunction ID	Shows code of user's job function.



name	Shows name of user's job function.

11.5 Get Company Template (GetCompanyTemplate_1)

The GetCompanyTemplate_1 request retrieves the list of all company template IDs.

The following example shows how to retrieve company templates:

XML Sample Request - Retrieving Company Template

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/CompanyAdmin/CompanyAdmin.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/08/08/webservices/rkd/
      CompanyAdmin_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetCompanyTemplate_Request_1 xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/CompanyAdmin_1"/>
  </Body>
</Envelope>
```

The response returns the following information:

XML Sample Response - Retrieving Company Template

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/08/08/webservices/
      rkd/CompanyAdmin_1/CompanyFromTemplate_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <GetCompanyTemplate_Response_1 xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/CompanyAdmin_1">
      <companyTemplate>
        <id>184</id>
        <name>Multex</name>
      </companyTemplate>
    </GetChannelReferenceInfoResponse_1>
  </Body>
</Envelope>
```

Attribute	Description
company template id	Defines the company template.
company template name	Shows the name of company template.

11.6 Update Company (UpdateCompany_1)

The UpdateCompany_1 request updates the properties of a particular company.

The following example updates the properties of the company with Company ID '184'. You receive Company ID in the response when creating a company (see section CompanyFromTemplate_1 for more details). You can change company name, 'disabled' flag, cancel date and reason, description and address.



XML Sample Request - Updating Company

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/CompanyAdmin/CompanyAdmin.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/08/08/webservices/rkd/CompanyAdmin_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <UpdateCompany_Request_1 xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/CompanyAdmin_1">
      <company>
        <companyId>184</companyId>
        <companyName>New_Company</companyName>
        <disabled>false</disabled>
        <cancelDate>2008-09-10T00:00:00</cancelDate>
        <cancelReason>Cancel_Reason</cancelReason>
        <description>description of company</description>
        <mailingAddress>
          <AddressLine1>Mailing_Address_Line1</AddressLine1>
          <City>City</City>
          <StateProvince>State</StateProvince>
          <PostalCode>PO_Code</PostalCode>
          <Country>Country</Country>
        </mailingAddress>
      </company>
    </UpdateCompany_Request_1>
  </Body>
</Envelope>

```

Attribute	Description
companyId	Identifies company (mandatory input parameter).
companyName	Name for the company to be created.
disabled	Shows whether the company is disabled.
cancelDate	Defines when the company will be disabled.
cancelReason	Shows the reason why the company is disabled.
description	Provides company description.
mailingAddresses	Defines company's mailing address.

The response returns the following information:

XML Sample Response - Updating Company

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/08/08/webservices/rkd/CompanyAdmin_1/CompanyFromTemplate_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <UpdateCompany_Response_1 xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/CompanyAdmin_1">
      </UpdateCompanyResponse_1>
    </UpdateCompany_Response_1>
  </Body>
</Envelope>

```



11.7 Country Codes

Country Code	Country Name
AF	Afghanistan
AL	Albania
DZA	Algeria
ASM	American Samoa
AD	Andorra
AND	Angola
AIA	Anguilla
AQ	Antarctica
AG	Antigua and Barbuda
ARG	Argentina
AM	Armenia
ABW	Aruba
AUS	Australia
AUT	Austria
AZ	Azerbaijan
BHS	Bahamas
BHR	Bahrain
BD	Bangladesh
BB	Barbados
BY	Belarus
BEL	Belgium
BLZ	Belize
BJ	Benin
BMU	Bermuda
BT	Bhutan
BOL	Bolivia
BA	Bosnia and Herzegovina
BWA	Botswana
BV	Bouvet Island
BRA	Brazil
IO	British Indian Ocean Territory
BN	Brunei Darussalam
BUL	Bulgaria
BF	Burkina Faso
BI	Burundi
KH	Cambodia
CM	Cameroon
CAN	Canada
CV	Cape Verde
CYM	Cayman Islands
CF	Central African Republic
TD	Chad
CHL	Chile
CHN	China
CX	Christmas Island
CC	Cocos (Keeling) Islands



COL	Colombia
KM	Comoros
CG	Congo
ZAR	Congo, The Democratic Republic of
CK	Cook Islands
CRI	Costa Rica
IVC	Cote d'Ivoire
HR	Croatia
CUB	Cuba
CYP	Cyprus
CZE	Czech Republic
DNK	Denmark
DJ	Djibouti
DM	Dominica
DO	Dominican Republic
TP	East Timor
ECU	Ecuador
EGY	Egypt
SLV	El Salvador
GQ	Equatorial Guinea
ER	Eritrea
EE	Estonia
ET	Ethiopia
FK	Falkland Islands
FO	Faroe Islands
FJ	Fiji
FIN	Finland
FRA	France
GF	French Guiana
PF	French Polynesia
TF	French Southern Territories
GAB	Gabon
GM	Gambia
GE	Georgia
DEU	Germany
GHA	Ghana
GI	Gibraltar
GRC	Greece
GL	Greenland
GD	Grenada
GP	Guadeloupe
GU	Guam
GT	Guatemala
GN	Guinea
GW	Guinea-Bissau
GY	Guyana
HT	Haiti
HM	Heard Island and McDonald Islands
HN	Honduras



HKG	Hong Kong
HUN	Hungary
ISL	Iceland
IND	India
IDN	Indonesia
IRN	Iran, Islamic Republic of
IQ	Iraq
IRL	Ireland
ISR	Israel
ITA	Italy
JAM	Jamaica
JPN	Japan
JOR	Jordan
KZ	Kazakhstan
KEN	Kenya
KI	Kiribati
PRK	Korea, Democratic People's Republic of
KOR	Korea, Republic of
KWT	Kuwait
KYR	Kyrgyzstan
LA	Lao People's Democratic Republic
LV	Latvia
LBN	Lebanon
LS	Lesotho
LBR	Liberia
LY	Libyan Arab Jamahiriya
LIE	Liechtenstein
LT	Lithuania
LUX	Luxembourg
MO	Macau
MK	Macedonia, The Former Yugoslav Republic of
MDG	Madagascar
MWI	Malawi
MYS	Malaysia
MV	Maldives
ML	Mali
MLT	Malta
MH	Marshall Islands
MQ	Martinique
MR	Mauritania
MUS	Mauritius
YT	Mayotte
MEX	Mexico
FM	Micronesia, Federated States of
MD	Moldova, Republic of
MC	Monaco
MN	Mongolia
ME	Montenegro
MS	Montserrat



MAR	Morocco
MZ	Mozambique
MM	Myanmar
NA	Namibia
NR	Nauru
NP	Nepal
NLD	Netherlands
ANT	Netherlands Antilles
NC	New Caledonia
NZL	New Zealand
NI	Nicaragua
NE	Niger
NGA	Nigeria
NU	Niue
NF	Norfolk Island
MP	Northern Mariana Islands
NOR	Norway
OM	Oman
PAK	Pakistan
PW	Palau
PS	Palestine
PAN	Panama
PNG	Papua New Guinea
PY	Paraguay
PER	Peru
PHL	Philippines
PN	Pitcairn
POL	Poland
PRT	Portugal
PRI	Puerto Rico
QAT	Qatar
RE	Reunion
ROM	Romania
RUS	Russian Federation
RW	Rwanda
SH	Saint Helena
KN	Saint Kitts and Nevis
LC	Saint Lucia
PM	Saint Pierre and Miquelon
VC	Saint Vincent and the Grenadines
WS	Samoa
SM	San Marino
ST	Sao Tome and Principe
SAU	Saudi Arabia
SN	Senegal
RS	Serbia
YUG	Serbia & Montenegro - Discontinue with effect from December 11, 2006
SC	Seychelles
SL	Sierra Leone



SGP	Singapore
SVK	Slovakia
SI	Slovenia
SB	Soloman Islands
SO	Somalia
ZAF	South Africa
GS	South Georgia and the South Sandwich Islands
ESP	Spain
LKA	Sri Lanka
SDN	Sudan
SUR	Suriname
SJ	Svalbard and Jan Mayen
SZ	Swaziland
SWE	Sweden
CHE	Switzerland
SY	Syrian Arab Republic
TWN	Taiwan
TJ	Tajikistan
TZA	Tanzania, United Republic of
THA	Thailand
TG	Togo
TK	Tokelau
TO	Tonga
TTO	Trinidad and Tobago
TUN	Tunisia
TUR	Turkey
TM	Turkmenistan
TC	Turks and Caicos Islands
TV	Tuvalu
UGA	Uganda
UA	Ukraine
ARE	United Arab Emirates
GBR	United Kingdom
USA	United States
UM	United States Minor Outlying Islands
URY	Uruguay
UZ	Uzbekistan
VUT	Vanuatu
VA	Vatican City State
VEN	Venezuela
VNM	Vietnam
VGB	Virgin Islands, British
VI	Virgin Islands, U.S.
WF	Wallis and Futuna
EH	Western Sahara
YE	Yemen
ZMB	Zambia
ZWE	Zimbabwe



11.8 User Job Roles

ID	Job Role	Job Role Description
269	FX & Interest Rate Portfolio Manager	You are typically involved in investing in FX and interest rate instruments.
270	FX & Interest Rate Research Analyst	You are typically involved in analysis of market trends in the FX and interest rate markets.
271	FX & Interest Rate Sales	You are typically involved in managing relationships with existing customers, promoting the firm's research and primary business to generate trade in FX and interest rate products.
272	FX Broker	You act as a broker between professional counter-parties in the FX markets.
273	FX Forward Trader	You are typically involved in FX Forward and Arbitrage Trading.
274	FX Options Sales & Trader	You are responsible for the trading of, or sales activities related to, FX options.
275	FX Trader	You are typically involved in FX Spot and Spot Arbitrage Trading.
276	Interest Rate Broker	You are mainly concerned with acting as a broker between professional counter-parties in the interest rate markets.
277	Interest Rate Futures Trader	You are responsible for trading interest rate futures.
278	Interest Rate Swaps Trader	You are an IRS Trader or Specialist IRS Sales Trader who generally trades products with tenor of over 2 years.
279	Interest Rate Trader	You are responsible for trading interest rate instruments.
280	Short Term Interest Rate Trader	You are typically responsible for FX Forwards, OIS, Money Market, FRA and other short term instruments and generally trade products with a tenor of under 2 years.
281	Fixed Income Job Roles	
282	Central Bank and Supranational Sales & Trader	You are responsible for trading or sales activities as part of a central bank or supranational organization.
283	Commercial Paper Sales & Trader	You are responsible for the trading of, or sales activities related to, Commercial Paper.
284	Convertible Bond Sales & Trader	You are responsible for the trading of, or sales activities related to, Convertible Bonds.
285	Corporate Bond Sales & Trader	You are responsible for the trading of, or sales activities related to, Corporate Bonds.
286	Credit Derivatives Sales & Trader	You are responsible for the trading of, or sales activities related to, credit derivatives.
287	Fixed Income Bond Futures Trader	You are responsible for the trading of fixed income bond futures. Can be an assistant role too.
288	Fixed Income Broker	You act as a broker between professional counter-parties in the fixed income markets.
289	Fixed Income Emerging Markets Sales & Trader	You are responsible for the trading of, or sales activities related to, emerging market credit instruments.
290	Fixed Income Portfolio Manager	You are typically involved in investing in fixed income instruments.
291	Fixed Income Research Analyst	You are typically involved in analysis of market trends in the fixed income markets.
292	Fixed Income Sales & Trader	You are responsible for the trading of, or sales activities related to, fixed income instruments.
293	Government / Agency Sales & Trader	You are responsible for the trading of, or sales activities related to, government or agency bonds.
294	High Yield Sales & Trader	You are responsible for the trading of, or sales activities related to, high yield bonds.
295	Market Strategist	You typically provide clients, prospects and consultants with ongoing updates about the investment philosophy, process and performance of specific products, and act as the primary contact for clients within the Investment team.
296	MBS / ABS / CDO Sales & Trader	You are responsible for the trading of, or sales activities related to, mortgage backed securities, asset backed securities or collateralized debt obligations.
297	Municipal Sales & Trader	You are responsible for the trading of, or sales activities related to, municipal bonds.
298	Repo Sales & Trader	You are responsible for the trading of, or sales activities related to, repurchase



		agreements.
299	Structured Products Trader / Analyst	You are responsible for the creation, trading or analysis of structured products.
300	Equity Job Roles	
301	Equity Derivatives Sales	You are typically involved in managing relationships with existing customers, promoting the firm's research and primary business and getting customers to trade equity derivative products.
302	Equity Derivatives Trader	You are typically involved in trading equity futures, options and other equity derivatives.
303	Equity Portfolio Manager	You are typically involved in investing in equity cash and derivative instruments.
304	Equity Portfolio Manager Who Trades	You are responsible for the execution of transactions for the portfolios you manage.
305	Equity Research Analyst	You are typically involved in analysis of market trends in the equity markets.
306	Equity Sales	You are typically involved in managing relationships with existing customers, promoting the firm's research and primary business to generate trade in equity products.
307	Equity Sales Trader	You are typically involved in managing relationships with existing customers, promoting the firm's research and primary business and executing trades in equity products.
308	Equity Trader	You are responsible for trading equity cash instruments.
309	Structured Products Trader / Analyst	You are responsible for the creation, trading or analysis of structured products.
310	Commodities & Energy Job Roles	
311	Agriculture Analyst	You are typically involved in analysis of trends in the agriculture markets.
312	Agriculture Broker	You are typically involved in broking agriculture futures, options and cash instruments.
313	Agriculture Purchasing / Supply Manager	You are typically involved in the physical supply chain for agriculture products.
314	Agriculture Sales & Trader	You are responsible for the trading of, or sales activities related to, agriculture futures, options and cash instruments.
315	Energy Analyst	You are typically involved in analysis of market trends in the energy markets.
316	Energy Broker	You are typically involved in broking energy futures, options and cash instruments.
317	Energy Purchasing / Supply Manager	You are typically involved in the physical supply chain for energy products.
318	Energy Sales & Trader	You are responsible for the trading of, or sales activities related to, energy products.
319	Metals Analyst	You are typically involved in analysis of market trends in the metals markets.
320	Metals Broker	You are typically involved in broking metals futures, options and cash instruments.
321	Metals Purchasing / Supply Manager	You are typically involved in the physical supply chain for metals products.
322	Metals Sales & Trader	You are responsible for the trading of, or sales activities related to, metals.
323	Shipping Agent	You typically represent ship owner / operators or charterers for physical shipments.
324	Shipping Analyst	You are responsible for analysis of market trends in the shipping markets.
325	Shipping Broker	You typically fix ships or arrange forward freight agreements for owner / operators and / or charterers.
326	Shipping Owner / Operator	You own or operate a shipping company.
327	Environmental Markets Job Roles	
328	Carbon Market Analyst	You are typically involved in the analysis of the market trends in the carbon market.
329	Carbon Market Broker	You are typically involved in broking carbon market contracts and / or CDM & JI deals.
330	Carbon Trader	You are typically involved in trading carbon market contracts.
331	CDM / JI Professional	You are typically involved in transactions associated with the Kyoto protocol mechanisms (Clean Development Mechanism and Joint Implementation).
332	Environmental Markets Analyst	You are typically involved in analysis of market trends in the environmental markets.
333	Environmental Markets Broker	You are typically involved in broking emissions, renewable energy certificates or weather derivatives.



334	Environmental Markets Sales & Trader	You are typically involved in trading emissions, renewable energy certificates or weather derivatives.
335	Media Job Roles	
336	Agency Account Executive / Account Director	You are responsible for the overall client relationship.
337	Content Manager	You are responsible for purchasing content sources but not part of an editorial team.
338	Creative Director	You typically oversee the design of branding and advertising for a client.
339	Editor in Chief / Editor / Head of News	You head an editorial team in a news organization.
340	Editorial Content Buyer	You are part of the editorial team in a news organization and responsible for purchasing content sources.
341	Exec. Producer / Producer	You work as a producer or executive producer in a media organization.
342	Journalist / Correspondent	You contribute reports to a newspaper, or radio or television news.
343	Media Buyer	You are responsible for purchasing advertising space within a range of media.
344	Media Planner	You typically plan the advertising strategy, and determine the timing of adverts and the most effective media to use.
345	Pictures / Graphics Editor	You are responsible for still image selection.
346	Cross Market Job Roles	
347	Algorithmic / Quantitative Trading	You are typically involved in developing algorithmic and / or quantitative trading strategies and the execution of trades.
348	Capital Markets / Syndication / Origination	You are typically involved in capital markets process: in the origination of transactions, targeting investors, syndication, marketing activities, pricing and allocation as well as the aftermarket activities.
349	Corporate Treasurer	You are typically involved in liquidity management, trade finance and managing the company's working capital. You may also manage company pension fund, investments and overall risk management.
350	Cross Asset Portfolio Manager	You are typically involved in longer term investment across different asset classes, you could also be a relationship manager.
351	Cross Asset Proprietary Trader	You are typically involved in trading any asset class for your institution and not for clients.
352	Cross Asset Research Analyst (Buy-side)	You are typically involved in research across multiple asset classes on buy-side.
353	Cross Asset Research Analyst (Sell-side)	You are typically involved in research across multiple asset classes on sell-side.
354	Cross Asset Trader	You are a trader and you trade several different asset types.
355	Economist	You are typically involved in analysis of economic fundamentals, usually in support of the trading, sales and investment functions.
356	Hedge Fund Portfolio Manager	You are responsible for investing in multiple asset classes as part of a hedge fund.
357	Hedge Fund Trader	You are typically involved in looking for profitable trading opportunities in cash and derivative securities as part of a hedge fund.
358	Investment Banker	You are typically assisting corporations to raise funds in the capital markets (both equity and debt), as well as in providing strategic advisory services for mergers, acquisitions and other types of financial transactions and financial organization.
359	Investor Relations Professional	You are typically involved in investor communications and act as a liaison between your organization, analysts and investors.
360	Private Equity / Venture Capitalist	You are typically involved in financing of new or developing businesses.
361	Securities Pricing Manager	You are responsible for sourcing and managing pricing feeds from various vendors for portfolio valuation purposes.
362	Technical Analyst	You are responsible for use of technical analysis to analyze market trends to support trading, sales and investment functions.
363	Risk Management and Control Job Roles	
364	Chief Risk Officer	You are typically in charge of assessing and planning for risk across the enterprise.



365	Credit Risk Officer / Manager	You are typically involved in credit pre-screening, fraud, bankruptcy, compliance and debt recovery.
366	Market Risk Manager	You are responsible for monitoring and assessing market risks in order to ensure appropriate controls and for mitigating or transferring risk where necessary.
367	Operational Risk Manager	You are responsible for monitoring and assessing operational risks in order to ensure appropriate controls and for mitigating or transferring risk where necessary.
368	Real Estate Job Roles	
369	Property Derivatives Sales & Trader	You are responsible for the trading of, or sales activities related to, property derivatives.
370	Real Estate Advisor / Agent	You are involved in Real Estate transactions, typically of direct property, on behalf of your clients, or your own firm.
371	Real Estate Banker	You are involved in advisory, underwriting, M&A focusing on the real estate sector.
372	Real Estate Fund Manager / REIT Manager	You invest the assets of a real estate fund, REIT, implement investment strategy and manage the day-to-day portfolio transactions.
373	Real Estate Research Analyst	You are typically involved in analysis of market trends in the real estate markets.
374	Wealth Management Roles	
375	Financial Advisor	You are typically involved in providing advice or consulting services to individuals on financial planning and investing.
376	Personal Investor	You are a customer of a bank, broker or wealth management company.
377	Private Banker	You provide investment advisory services and other banking services to individual investors with sizable accounts, typically in excess of \$1million.
378	Retail Broker	You are a transaction oriented, commission based, stock broker advising and executing investments on behalf of clients.
379	Wealth Manager	You are typically responsible for managing client relationships in a financial institution.
380	Other Job Roles	
381	Accountant / Lawyer	You are typically responsible for ensuring the effective operation of accounting and financial activities within the enterprise or ensuring the legality of commercial transactions.
382	Back Office / Settlement	You are typically involved in settlement instruction processing, fail monitoring of trades and exception cleaning.
383	Business Analyst - IT / Market Data	You are typically responsible for translating IT requirements into business solutions through interfaces with stakeholders and the IT department.
384	Chief Information Officer / Chief Technology Officer	You are responsible for defining vision, strategy, direction and oversight for Information Technology in an organization.
385	Chief Investment Officer	You are responsible for the management of your organization's portfolio, by developing a long-term investment policy and asset allocation strategy.
386	Compliance Officer	You are responsible for dealing with any compliance issues that arise during financial transactions, trading, or the handling of client accounts and ensuring that your organization and all employees understand and abide by internal and regulatory procedure.
387	Consultant	You provide consulting services either internally to your own organization or to external clients.
388	Corporate Librarian / Information Research Professional	You are typically involved in collecting, organizing and presenting information.
389	Database Administrator	You are typically responsible for planning, maintenance and development of databases.
390	Developer / Programmer	You are typically responsible for designing, developing, testing and implementing software to improve business efficiency and productivity.
391	e-Commerce Manager	You plan and execute product groups or asset classes overall e-Commerce development, risk management and distribution strategy. You also provide leadership for the company's web site development and coordination between the company's internal departments.
392	Fund Administrator	You are typically involved in the management and control of day-to-day fund accounting activities and liaising with auditors, regulators and clients regarding all accounting issues.



393	IT Manager / Analyst	You typically plan, coordinate, direct, and design IT-related activities of your organization.
394	Market Data Manager	You are involved in overseeing and managing the Market Data delivery, operations and support.
395	Marketing Officer / Manager	You are responsible in various marketing-related activities within your organization.
396	Middle Office	You are responsible for trade processing: you handle trade confirmations and cash settlements as well as profitability reporting, risk position analysis and resolution of cash and position differences.
397	Operations Manager	You are responsible for ensuring that business operations are efficient and effective.
398	Performance Measurement Officer / Analyst	You are responsible for producing performance reports on in-house (proprietary) and peer group investment funds.
399	Product and IT Support - 1st Line	You are the first point of contact for users experiencing product-related technical issues.
400	Product and IT Support - 2nd / 3rd Line	You are the immediate escalation route for technical issues not resolved by first line support.
401	Quantitative Analyst	You are a specialist in the mathematical techniques of finance and carry out quantitative research to develop and enhance models for risk management, asset allocation and investment strategies.
402	Reference Data Manager	You are typically responsible for sourcing and managing reference data feeds from various vendors.
403	Sales Person / Account Manager (non-financial)	You are responsible for sales and / or account management in a non-financial institution.
404	Senior Executive	You are in a board-level or top-tier management role.
405	Strategic Planning / Business Development Professional	You are responsible for defining corporate strategy, competitors analysis and identifying M&A opportunities.
406	Systems Engineer	You are responsible for enabling the realization and deployment of successful systems.
407	University Professor / Student	You are a student or a professor in a university or other educational institution.
408	All Job Roles	
409	Accountant / Lawyer	You are typically responsible for ensuring the effective operation of accounting and financial activities within the enterprise or ensuring the legality of commercial transactions.
410	Agency Account Executive / Account Director	You are responsible for the overall client relationship.
411	Agriculture Analyst	You are typically involved in analysis of trends in the agriculture markets.
412	Agriculture Broker	You are typically involved in broking agriculture futures, options and cash instruments.
413	Agriculture Purchasing / Supply Manager	You are typically involved in the physical supply chain for agriculture products.
414	Agriculture Sales & Trader	You are responsible for the trading of, or sales activities related to, agriculture futures, options and cash instruments.
415	Algorithmic / Quantitative Trading	You are typically involved in developing algorithmic and / or quantitative trading strategies and the execution of trades.
416	Back Office / Settlement	You are typically involved in settlement instruction processing, fail monitoring of trades and exception cleaning.
417	Business Analyst - IT / Market Data	You are typically responsible for translating IT requirements into business solutions through interfaces with stakeholders and the IT department.
418	Capital Markets / Syndication / Origination	You are typically involved in capital markets process: in the origination of transactions, targeting investors, syndication, marketing activities, pricing and allocation as well as the aftermarket activities.
419	Carbon Market Analyst	You are typically involved in the analysis of the market trends in the carbon market.
420	Carbon Market Broker	You are typically involved in broking carbon market contracts and / or CDM & JI deals.
421	Carbon Trader	You are typically involved in trading carbon market contracts.
422	CDM / JI Professional	You are typically involved in transactions associated with the Kyoto protocol mechanisms (Clean Development Mechanism and Joint Implementation).
423	Central Bank and	You are responsible for trading or sales activities as part of a central bank or



	Supranational Sales & Trader	supranational organization.
424	Chief Information Officer / Chief Technology Officer	You are responsible for defining vision, strategy, direction and oversight for Information Technology in an organization.
425	Chief Investment Officer	You are responsible for the management of your organization's portfolio, by developing a long-term investment policy and asset allocation strategy.
426	Chief Risk Officer	You are typically in charge of assessing and planning for risk across the enterprise.
427	Commercial Paper Sales & Trader	You are responsible for the trading of, or sales activities related to, Commercial Paper.
428	Compliance Officer	You are responsible for dealing with any compliance issues that arise during financial transactions, trading, or the handling of client accounts and ensuring that your organization and all employees understand and abide by internal and regulatory procedures.
429	Consultant	You provide consulting services either internally to your own organization or to external clients.
430	Content Manager	You are responsible for purchasing content sources but not part of an editorial team.
431	Convertible Bond Sales & Trader	You are responsible for the trading of, or sales activities related to, Convertible Bonds.
432	Corporate Bond Sales & Trader	You are responsible for the trading of, or sales activities related to, Corporate Bonds.
433	Corporate Librarian / Information Research Professional	You are typically involved in collecting, organizing and presenting information.
434	Corporate Treasurer	You are typically involved in liquidity management, trade finance and managing the company's working capital. You may also manage company pension fund, investments and overall risk management.
435	Creative Director	You typically oversee the design of branding and advertising for a client.
436	Credit Derivatives Sales & Trader	You are responsible for the trading of, or sales activities related to, credit derivatives.
437	Credit Risk Officer / Manager	You are typically involved in credit pre-screening, fraud, bankruptcy, compliance and debt recovery.
438	Cross Asset Portfolio Manager	You are typically involved in longer term investment across different asset classes, you could also be a relationship manager.
439	Cross Asset Proprietary Trader	You are typically involved in trading any asset class for your institution and not for clients.
440	Cross Asset Research Analyst (Buy-side)	You are typically involved in research across multiple asset classes on buy-side.
441	Cross Asset Research Analyst (Sell-side)	You are typically involved in research across multiple asset classes on sell-side.
442	Cross Asset Trader	You are a trader and you trade several different asset types.
443	Database Administrator	You are typically responsible for planning, maintenance and development of databases.
444	Developer / Programmer	You are typically responsible for designing, developing, testing and implementing software to improve business efficiency and productivity.
445	e-Commerce Manager	You plan and execute product groups or asset classes overall e-Commerce development, risk management and distribution strategy. You also provide leadership for the company's web site development and coordination between the company's internal departments.
446	Economist	You are typically involved in analysis of economic fundamentals, usually in support of the trading, sales and investment functions.
447	Editor in Chief / Editor / Head of News	You head an editorial team in a news organization.
448	Editorial Content Buyer	You are part of the editorial team in a news organization and responsible for purchasing content sources.
449	Energy Analyst	You are typically involved in analysis of market trends in the energy markets.
450	Energy Broker	You are typically involved in broking energy futures, options and cash instruments.
451	Energy Purchasing / Supply	You are typically involved in the physical supply chain for energy products.



	Manager	
452	Energy Sales & Trader	You are responsible for the trading of, or sales activities related to, energy products.
453	Environmental Markets Analyst	You are typically involved in analysis of market trends in the environmental markets.
454	Environmental Markets Broker	You are typically involved in broking emissions, renewable energy certificates or weather derivatives.
455	Environmental Markets Sales & Trader	You are typically involved in trading emissions, renewable energy certificates or weather derivatives.
456	Equity Derivatives Sales	You are typically involved in managing relationships with existing customers, promoting the firm's research and primary business and getting customers to trade equity derivative products.
457	Equity Derivatives Trader	You are typically involved in trading equity futures, options and other equity derivatives.
458	Equity Portfolio Manager	You are typically involved in investing in equity cash and derivative instruments.
459	Equity Portfolio Manager Who Trades	You are responsible for the execution of transactions for the portfolios you manage.
460	Equity Research Analyst	You are typically involved in analysis of market trends in the equity markets.
461	Equity Sales	You are typically involved in managing relationships with existing customers, promoting the firm's research and primary business to generate trade in equity products.
462	Equity Sales Trader	You are typically involved in managing relationships with existing customers, promoting the firm's research and primary business and executing trades in equity products.
463	Equity Trader	You are responsible for trading equity cash instruments.
464	Exec. Producer / Producer	You work as a producer or executive producer in a media organization.
465	Financial Advisor	You are typically involved in providing advice or consulting services to individuals on financial planning and investing.
466	Fixed Income Bond Futures Trader	You are responsible for the trading of fixed income bond futures. Can be an assistant role too.
467	Fixed Income Broker	You act as a broker between professional counter-parties in the fixed income markets.
468	Fixed Income Emerging Markets Sales & Trader	You are responsible for the trading of, or sales activities related to, emerging market credit instruments.
469	Fixed Income Portfolio Manager	You are typically involved in investing in fixed income instruments.
470	Fixed Income Research Analyst	You are typically involved in analysis of market trends in the fixed income markets.
471	Fixed Income Sales & Trader	You are responsible for the trading of, or sales activities related to, fixed income instruments.
472	Fund Administrator	You are typically involved in the management and control of day-to-day fund accounting activities and liaising with auditors, regulators and clients regarding all accounting issues.
473	FX & Interest Rate Portfolio Manager	You are typically involved in investing in FX and interest rate instruments.
474	FX & Interest Rate Research Analyst	You are typically involved in analysis of market trends in the FX and interest rate markets.
475	FX & Interest Rate Sales	You are typically involved in managing relationships with existing customers, promoting the firm's research and primary business to generate trade in FX and interest rate products.
476	FX Broker	You act as a broker between professional counter-parties in the FX markets.
477	FX Forward Trader	You are typically involved in FX Forward and Arbitrage Trading.
478	FX Options Sales & Trader	You are responsible for the trading of, or sales activities related to, FX options.
479	FX Trader	You are typically involved in FX Spot and Spot Arbitrage Trading.
480	Government / Agency Sales & Trader	You are responsible for the trading of, or sales activities related to, government or agency bonds.
481	Hedge Fund Portfolio Manager	You are responsible for investing in multiple asset classes as part of a hedge fund.
482	Hedge Fund Trader	You are typically involved in looking for profitable trading opportunities in cash and derivative securities as part of a hedge fund.



483	High Yield Sales & Trader	You are responsible for the trading of, or sales activities related to, high yield bonds.
484	Interest Rate Broker	You are mainly concerned with acting as a broker between professional counter-parties in the interest rate markets.
485	Interest Rate Futures Trader	You are responsible for trading interest rate futures.
486	Interest Rate Swaps Trader	You are an IRS Trader or Specialist IRS Sales Trader who generally trades products with tenor of over 2 years.
487	Interest Rate Trader	You are responsible for trading interest rate instruments.
488	Investment Banker	You are typically assisting corporations to raise funds in the capital markets (both equity and debt), as well as in providing strategic advisory services for mergers, acquisitions and other types of financial transactions and financial organization.
489	Investor Relations Professional	You are typically involved in investor communications and act as a liaison between your organization, analysts and investors.
490	IT Manager / Analyst	You typically plan, coordinate, direct, and design IT-related activities of your organization.
491	Journalist / Correspondent	You contribute reports to a newspaper, or radio or television news.
492	Market Data Manager	You are involved in overseeing and managing the Market Data delivery, operations and support.
493	Market Risk Manager	You are responsible for monitoring and assessing market risks in order to ensure appropriate controls and for mitigating or transferring risk where necessary.
494	Market Strategist	You typically provide clients, prospects and consultants with ongoing updates about the investment philosophy, process and performance of specific products, and act as the primary contact for clients within the Investment team.
495	Marketing Officer / Manager	You are responsible in various marketing-related activities within your organization.
496	MBS / ABS / CDO Sales & Trader	You are responsible for the trading of, or sales activities related to, mortgage backed securities, asset backed securities or collateralized debt obligations.
497	Media Buyer	You are responsible for purchasing advertising space within a range of media.
498	Media Planner	You typically plan the advertising strategy, and determine the timing of adverts and the most effective media to use.
499	Metals Analyst	You are typically involved in analysis of market trends in the metals markets.
500	Metals Broker	You are typically involved in broking metals futures, options and cash instruments.
501	Metals Purchasing / Supply Manager	You are typically involved in the physical supply chain for metals products.
502	Metals Sales & Trader	You are responsible for the trading of, or sales activities related to, metals.
503	Middle Office	You are responsible for trade processing: you handle trade confirmations and cash settlements as well as profitability reporting, risk position analysis and resolution of cash and position differences.
504	Municipal Sales & Trader	You are responsible for the trading of, or sales activities related to, municipal bonds.
505	Operational Risk Manager	You are responsible for monitoring and assessing operational risks in order to ensure appropriate controls and for mitigating or transferring risk where necessary.
506	Operations Manager	You are responsible for ensuring that business operations are efficient and effective.
507	Performance Measurement Officer / Analyst	You are responsible for producing performance reports on in-house (proprietary) and peer group investment funds.
508	Personal Investor	You are a customer of a bank, broker or wealth management company.
509	Pictures / Graphics Editor	You are responsible for still image selection.
510	Private Banker	You provide investment advisory services and other banking services to individual investors with sizable accounts, typically in excess of \$1million.
511	Private Equity / Venture Capitalist	You are typically involved in financing of new or developing businesses.
512	Product and IT Support - 1st Line	You are the first point of contact for users experiencing product-related technical issues.
513	Product and IT Support - 2nd / 3rd Line	You are the immediate escalation route for technical issues not resolved by first line support.
514	Property Derivatives Sales & Trader	You are responsible for the trading of, or sales activities related to, property derivatives.



515	Quantitative Analyst	You are a specialist in the mathematical techniques of finance and carry out quantitative research to develop and enhance models for risk management, asset allocation and investment strategies.
516	Real Estate Advisor / Agent	You are involved in Real Estate transactions, typically of direct property, on behalf of your clients, or your own firm.
517	Real Estate Banker	You are involved in advisory, underwriting, M&A focusing on the real estate sector.
518	Real Estate Fund Manager / REIT Manager	You invest the assets of a real estate fund, REIT, implement investment strategy and manage the day-to-day portfolio transactions.
519	Real Estate Research Analyst	You are typically involved in analysis of market trends in the real estate markets.
520	Reference Data Manager	You are typically responsible for sourcing and managing reference data feeds from various vendors.
521	Repo Sales & Trader	You are responsible for the trading of, or sales activities related to, repurchase agreements.
522	Retail Broker	You are a transaction oriented, commission based, stock broker advising and executing investments on behalf of clients.
523	Sales Person / Account Manager (non-financial)	You are responsible for sales and / or account management in a non-financial institution.
524	Securities Pricing Manager	You are responsible for sourcing and managing pricing feeds from various vendors for portfolio valuation purposes.
525	Senior Executive	You are in a board-level or top-tier management role.
526	Shipping Agent	You typically represent ship owner / operators or charterers for physical shipments.
527	Shipping Analyst	You are responsible for analysis of market trends in the shipping markets.
528	Shipping Broker	You typically fix ships or arrange forward freight agreements for owner / operators and / or charterers.
529	Shipping Owner / Operator	You own or operate a shipping company.
530	Short Term Interest Rate Trader	You are typically responsible for FX Forwards, OIS, Money Market, FRA and other short term instruments and generally trade products with a tenor of under 2 years.
531	Strategic Planning / Business Development Professional	You are responsible for defining corporate strategy, competitors analysis and identifying M&A opportunities.
532	Structured Products Trader / Analyst	You are responsible for the creation, trading or analysis of structured products.
533	Systems Engineer	You are responsible for enabling the realization and deployment of successful systems.
534	Technical Analyst	You are responsible for use of technical analysis to analyse market trends to support trading, sales and investment functions.
535	University Professor / Student	You are a student or a professor in a university or other educational institution.
536	Wealth Manager	You are typically responsible for managing client relationships in a financial institution.



chapter 12 Document Retrieval

The Document Retrieval service is used to retrieve documents by Document ID or Contributor ID and Contributor Document ID. The service checks the authenticated user's credentials and delivers documents the user is entitled to. The service supports all file types in the document repository including multimedia files.

The service also allows you to retrieve document thumbnails to determine a document's contents: whether it is a text or a chart.

You can search for Document IDs and Contributor Document IDs using the Document Search service. See section Document Search for more information.

12.1 Authentication and Authorization

Authorization

All requests to the TRKD API require an authorization token. For details, see section Understanding Authentication Tokens.

Authentication

TRKD API uses Reuters impersonation tokens for each effective user. In this case, Thomson Reuters must create each user before your application authenticates them. Unmanaged effective users are not supported in TRKD API.

See section Creating a Token for more information.

12.2 Identifying the User in Each Request

This section describes generating the user authorization token before retrieving documents.

12.2.1 Generating the User Authorization Token

Your application must generate a user authorization token before making any document retrieval requests by submitting an authentication request (XML including the user login and password).

To generate the token, submit the following XML:

XML Sample Request - Creating a Service Token

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/TokenManagement/TokenManagement.svc/
    Anonymous</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1/
    CreateServiceToken_1</Action>
  </Header>
  <Body>
    <CreateServiceToken_Request_1 xmlns:global="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1" xmlns="http://www.
    reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1">
      <ApplicationID xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">[AppID]</ApplicationID>
      <Username>[service user]</Username>
      <Password>[password]</Password>
    </CreateServiceToken_Request_1>
  </Body>
</Envelope>
```



The Thomson Reuters Research API returns the following XML:

XML Sample Response - Creating a Service Token

```
<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" s:mustUnderstand="1" >http://www.reuters.com/ns/2006/05/01/webservices/
rkd/TokenManagement_1/CreateServiceToken_1_Reply</a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <CreateServiceToken_Response_1 xmlns="https://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1">
      <Expiration>[token expiration YYYY-MM-DDTHH:MM:SS]</Expiration>
      <Token xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">[service token]</Token>
    </CreateServiceToken_Response_1>
  </s:Body>
</Envelope>
```

Note: The user authorization token expires in a configurable time period. The default expiration is 90 minutes. If you make a Document Retrieval request with an expired or invalid authorization token, the service returns HTTP 403 Forbidden status response with the error description included in the response HTTP headers (see Error Handling). You can also enable redirection for an invalid or expired authorization - see Redirection for Expired or Invalid Authorization (Optional).

12.2.2 Setting the User Authorization Token

The value for the token and Application ID must be presented as a cookie (HTTP header).

Cookie:

- RkdToken
- RkdAppld

12.2.3 Required Domain Mapping

Since each request must read a cookie written by your application, the request and your application must be in the same domain. To accomplish this, use your DNS create a CNAME to map the TRKD API host name to a name in your domain, as shown in the following example:

[rkd api name] -> d.mydomain.com

Using the above example, your application sets the authorization cookie in "mydomain.com" and accesses the Document Retrieval service by:

http://d.mydomain.com/api/DocumentRetrieval/DocumentRetrieval.svc

12.3 Retrieving Documents on Behalf of Another User

After registering your application with Thomson Reuters, you will be provided a user name and password which you can use to submit requests. This account is generally referred to as the "service account". For implementations that only require one user context, use this service account to generate the "Authorization" header for each request.

This service account can also be configured as a "super user", with the ability to submit request on behalf of another user - the "effective user". This means the Document Retrieval service executes the query based on the entitlements of the effective user - not the service account. To do this, generate an Impersonation Token that authenticates an effective user:

Generate a token for the effective user by making a CreateImpersonationToken_Request_1 request, specifying the effective user in the <EffectiveUsername> element as shown in the following example:

XML Sample Request - Creating an Impersonation Token



```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/TokenManagement/TokenManagement.svc/Anonymous</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1/CreateImpersonationToken_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <CreateImpersonationToken_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1">
      <EffectiveUsername>[effective user]</EffectiveUsername>
    </CreateImpersonationToken_Request_1>
  </Body>
</Envelope>
```

Note: The "password" attribute is not required for this request.

You can create both Service and Impersonation Token in one request - by using a CreateImpersonationToken_Request_2 operation and passing the service user credentials and the effective user id at once.

XML Sample Request - Creating Service and Impersonation Tokens

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/2006/05/01/TokenManagement.svc/Anonymous</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1/CreateImpersonationToken_2</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <CreateImpersonationToken_Request_2 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1">
      <ApplicationID xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common">[AppID]</ApplicationID>
      <Username>[service user]</Username>
      <Password>[password]</Password>
      <EffectiveUsername>[effective user]</EffectiveUsername>
    </CreateImpersonationToken_Request_2>
  </Body>
</Envelope>
```

12.4 Retrieving Documents (DocumentRetrieval_1)

The user can retrieve documents either by document ID (docID) or - by Contributor ID (CtbID) and Contributor Document ID (CtbDocID).

12.4.1 Retrieving Document by Document ID

To retrieve a document using document ID, make the following DocumentRetrieval_1 request:

Http Sample Request

```
http://docs.rkd.reuters.com/api/DocumentRetrieval/DocumentRetrieval.svc/docs/[docID]/DocumentType?pages=[page]&refNo=[reference_number]
```



Cookie: RkdAppId= [AppID]; RkdToken=[RkdToken]

Attribute	Description
DocumentType	Defines the document type to be retrieved by the request. Please, provide DocumentType with the value of "fileType" attribute contained in the DocSearch response. For example, use "DocumentType = syn" to retrieve document synopsis. The possible values are: • activeDoc - use this value to retrieve documents of the following types: doc, xsl, etc; • pdf - use this value to get documents in pdf format; • syn - apply this value to retrieve document synopsis; • url - use this value to redirect to the specified url; • web - use this value to get html documents with links to other html pages, images, stylesheets, etc; • other - specify other document type you want to retrieve (txt, etc).
pages	Defines either page numbers or page ranges, for example: • pages=2 • pages=1-5;7,9 Note: Document pages start from 0.
refNo	(Optional) Specifies reference information to the purchase record. If you specify it by document retrieval, this referenceCode will be recorded in the purchase record. If you then send a GetPurchaseHistory_1 request, you'll see the purchase record of the downloaded document with the referenceCode you've specified.

Note: If fileType="web" the URL must contain the forward slash "/" at the end:
<http://docs.rkd.reuters.com/api/2008/01/12/DocumentRetrieval.svc/docs/40465480/web/>

The following example retrieves synopsis of the document with the 41958041 docID:

Http Sample Request - Retrieving Document Synopsis

<http://docs.rkd.reuters.com/api/DocumentRetrieval/DocumentRetrieval.svc/docs/41958041/syn>

Cookie: RkdAppId= [AppID]; RkdToken=[RkdToken]

Http Sample Response - Retrieving Document Synopsis

HTTP/1.1 200 OK

Content-Length: 0
 Cache-Control: private
 Date: Mon, 14 Apr 2008 12:29:51 GMT
 Expires: Mon, 14 Apr 2008 07:29:51 GMT
 Server: Microsoft-IIS/6.0
 X-AspNet-Version: 2.0.50727
 X-Powered-By: ASP.NET

If the user authorization token is invalid or expired, the service returns HTTP 403 Forbidden status response with the error description included in the response HTTP headers (see Error Handling). The Document Retrieval service supports also redirection for expired or invalid authorization (see Redirection for Expired or Invalid Authorization (Optional)).

Note. The ResellerId parameter is determined automatically by the TRKD API inner logic and cannot be specified in the request. This numeric code specifies the resellerId of a reseller agent that can resell documents.

12.4.2 Retrieving Document by Contributor ID and Contributor Document ID

To retrieve a document using Contributor ID and Contributor Document ID, make the following DocumentRetrieval_1 request:

Http Sample Request



```
http://docs.rkd.reuters.com/api/DocumentRetrieval/DocumentRetrieval.svc/docs/CtbID/[CtbDocID]/DocumentType?pages=[page_number]
&refNo=[reference_number]
```

```
Cookie: RkdAppId= [AppID]; RkdToken=[RkdToken]
```

Attribute	Description
DocumentType	Defines the document type to be retrieved by the request. Please, provide DocumentType with the value of "fileType" attribute contained in the DocSearch response. For example, use "DocumentType = syn" to retrieve document synopsis. The possible values are: • activeDoc - use this value to retrieve documents of the following types: doc, xsl, etc; • pdf - use this value to get documents in pdf format; • syn - apply this value to retrieve document synopsis; • url - use this value to redirect to the specified url; • web - use this value to get html documents with links to other html pages, images, stylesheets, etc; • other - specify other document type you want to retrieve (txt, etc).
pages	Defines either page numbers or page ranges, for example: • pages=2 • pages=1-5;7,9 Note: Document pages start from 0.
refNo	(Optional) Specifies a reference information to the purchase record. If you specify it by document retrieval, this referenceCode will be recorded in the purchase record. If you then send a GetPurchaseHistory_1 request, you'll see the purchase record of the downloaded document with the referenceCode you've specified.

Note: If fileType="web" the URL must contain the forward slash "/" at the end:

```
http://docs.rkd.reuters.com/api/DocumentRetrieval/DocumentRetrieval.svc/docs/17459/3853_L/web/
```

The following example retrieves pdf document with the 14505 CtbID and 2263 CtbDocID:

Http Sample Request - Retrieving Document

```
http://docs.rkd.reuters.com/api/DocumentRetrieval/DocumentRetrieval.svc/docs/14505/2263/pdf
```

```
Cookie: RkdAppId= [AppID]; RkdToken=[RkdToken]
```

Note: Both parameters (CtbID and CtbDocID) are required in the request:

- If a user enters null (nothing) for ctbid (contributor id) and a valid ctbdoid (contributor document id) then the documentretrieval service will return an error.
- If a user enters any value for ctbid, for example 1, and a valid value for ctbdoid then the documentretrieval service will return the document. The back-end service is flexible to allow searching for documents based on the value of ctbdoid.
- If a user enters a valid ctbid and a valid ctbdoid, then the documentretrieval service will also return the document.

Http Sample Response - Retrieving Document

```
HTTP/1.1 200 OK
```

```
Content-Length: 0
Cache-Control: private
Date: Mon, 14 Apr 2008 12:29:51 GMT
Expires: Mon, 14 Apr 2008 07:29:51 GMT
Server: Microsoft-IIS/6.0
X-AspNet-Version: 2.0.50727
X-Powered-By: ASP.NET
```

If the user authorization token is invalid or expired, the service returns HTTP 403 Forbidden status response with the error description included in the response HTTP headers (see Error Handling). The Document Retrieval service supports also redirection for expired or invalid authorization (see Redirection for Expired or Invalid Authorization (Optional)).



12.5 Retrieving Document Thumbnails (GetThumbs_1)

To retrieve document thumbnails use the GetThumbs_1 request:

Http Sample Request
<pre>http://docs.rkd.reuters.com/api/DocumentRetrieval/DocumentRetrieval.svc/thumbs/[DocID]/[page number] Cookie: RkdAppId=[AppID]; RkdToken=[RkdToken]</pre>

Note: Document pages start from the number 0. Only pages of PDF documents can be presented as thumbnails.

12.6 Error Handling

The service logs the errors in the following HTTP headers:

- **RkdFaultCode:** the EventID full name
- **RkdFaultReason:** exception message
- **ClientErrorReference:** unique error reference number

Please check HTTP headers to find the cause of errors.

Note: If you get the "Error occurred while processing the request, please try again. If problem persists, contact product support." error while trying to download a document, you must follow the recommendations from the error message and try to download the document again.

12.7 Redirection for Expired or Invalid Authorization (Optional)

To enable redirection for expired or invalid authorization, you must provide the TRKD API team the URL address for your "invalid/expired authorization" page.

Once this configuration is complete, the Document Retrieval service redirects to your "invalid/expired authorization" page URL (often called your "redirectURL"). To help your "invalid authorization" page and/or "expired authorization" page to process, the service passes the original URL address. This value is URL-encoded and associated with the parameter "u". In addition, the service passes the reason for the redirection associated with the parameter "r". Values for "r" can be "et" (expired token), "it" (invalid token). In this case the response has a 302 HTTP status code and a redirect URL in the "Location" HTTP header.

With this information you can, for example, "recharge" an expired authorization token and deliver the requested document without alerting the user. In most cases, your expired token logic will be:

1. Post a CreateServiceToken_1 request to the TokenManagement_1 service for the service account and receive authorization token.
2. Post a CreateImpersonationToken_1 request to the TokenManagement_1 service for the effective user account and receive authorization token.
3. Redirect to the original (DocumentRetrieval.svc) URL and deliver the document to the user.

12.8 Handling Negative Values

This section handles issues when requested documents or pages contain negative price values and how the Document Retrieval service processes them.

Case 1. The request document's total price has positive value but price per page is negative. The document can be retrieved as a whole.

Http Sample Request 1
<pre>http://docs.rkd.reuters.com/api/DocumentRetrieval/DocumentRetrieval.svc/docs/57635849/pdf Cookie: RkdAppId=[AppID]; RkdToken=[RkdToken]</pre>



The user gets the following HTTP response:

Http Sample Response 1

HTTP/1.1 200 OK

Cache-Control: public, must-revalidate, max-age=0
 Content-Length: 311577
 Content-Type: application/pdf
 Expires: Fri, 18 Nov 2011 16:57:12 GMT
 Last-Modified: Fri, 18 Nov 2011 13:57:12 GMT
 Server: Microsoft-IIS/7.5
 X-AspNet-Version: 4.0.30319
 Content-Disposition: inline; filename=57635849.pdf
 Content-Type: 57635849.pdf

Case 2. The requested document has negative values both for total price and price per page.

Http Sample Request 2

http://docs.rkd.reuters.com/api/DocumentRetrieval/DocumentRetrieval.svc/docs/28995123/pdf
 Cookie: RkdAppId=[AppID]; RkdToken=[RkdToken]

The user gets the following error:

Http Sample Response 2

HTTP/1.1 500 Internal Server Error

Cache-Control: private
 Content-Length: 0
 Content-Type: text/html
 Server: Microsoft-IIS/7.5
 X-AspNet-Version: 4.0.30319
 RkdFaultCode: **DocumentRetrieval_DocumentPriceNotFound**
 RkdFaultReason: **Total price and price per page are not found** (DocIds:28995123)
 ClientErrorReference: 1fc8f62da27b40809935c59809e0ea42
 X-Powered-By: ASP.NET

Case 3. The requested document has positive value for total price and negative value for price per page. The document cannot be retrieved by pages.

Http Sample Request 3

http://docs.rkd.reuters.com/api/DocumentRetrieval/DocumentRetrieval.svc/docs/57635849/pdf?pages=1
 Cookie: RkdAppId=[AppID]; RkdToken=[RkdToken]

Http Sample Response 3

HTTP/1.1 500 Internal Server Error

Cache-Control: private
 Content-Length: 0
 Content-Type: text/html
 Server: Microsoft-IIS/7.5
 X-AspNet-Version: 4.0.30319
 RkdFaultCode: **DocumentRetrieval_DocumentNotAllowedToPerPageDownload**
 RkdFaultReason: **Documents: 57635849 do not support per page download.**
 ClientErrorReference: da529db26edf4e8f9e58a7a7a45d7e7d
 X-Powered-By: ASP.NET



Case 4. The requested document has 0 (free) value for total price and negative for price per page. The document can be retrieved as a whole.

Http Sample Request 4

`http://docs.rkd.reuters.com/api/DocumentRetrieval/DocumentRetrieval.svc/docs/57519670/pdf`

Cookie: RkdAppId=[AppID]; RkdToken=[RkdToken]

Http Sample Response 4

HTTP/1.1 200 OK

Cache-Control: public, must-revalidate, max-age=0
Content-Length: 110242
Content-Type: application/pdf
Expires: Fri, 18 Nov 2011 15:59:46 GMT
Last-Modified: Fri, 18 Nov 2011 12:59:46 GMT
Server: Microsoft-IIS/7.5
X-AspNet-Version: 4.0.30319
Content-Disposition: inline; filename=57519670.pdf
Content-Title: 57519670.pdf
X-Powered-By: ASP.NET

Case 5: The document has 0 value for total price and negative value for price per page. The document cannot be retrieved by pages.

Http Sample Request 5

`http://docs.rkd.reuters.com/api/DocumentRetrieval/DocumentRetrieval.svc/docs/57519670/pdf?pages=1`

Cookie: RkdAppId=[AppID]; RkdToken=[RkdToken]

Http Sample Response 5

HTTP/1.1 500 Internal Server Error

Cache-Control: private
Content-Length: 0
Content-Type: text/html
Server: Microsoft-IIS/7.5
X-AspNet-Version: 4.0.30319
RkdFaultCode: **DocumentRetrieval_DocumentNotAllowedToPerPageDownload**
RkdFaultReason: **Documents: 57519670 do not support per page download.**
ClientErrorReference: 9c7ce5bef5264d19844cb9689b9f7650
X-Powered-By: ASP.NET



chapter 13 Document Search

The Document Search service gives you the possibility to search for documents and retrieve document information from the electronic library contributed by research analysts of different companies.

Each and every document containing financial or analytical data has a set of attributes assigned to them by the document's author. The Document Search service uses those attributes to find the documents satisfying the search criteria.

To retrieve actual documents, use the Document Retrieval service. See section Document Retrieval for more information.

13.1 Authentication/Authorization, Service Endpoint, and Required Headers

Authorization

All requests to the Document Search web service require an authorization token. For details, see section Understanding Authentication Tokens.

Authentication

Document Search uses Reuters impersonation tokens for each effective user. In this case, Thomson Reuters must create each user before your application authenticates them. Unmanaged effective users are not supported in Document Search.

For additional information on creating a Service Token, see section Creating a Token.

Service Endpoint

Document Search Endpoint

<http://api.rkd.reuters.com/api/DocSearch/DocSearch.svc>

Required Header

Required HTTP Headers

POST api/DocSearch/DocSearch.svc HTTP/1.1
Content-Type: application/soap+xml
Host: api.rkd.reuters.com
Content-Length: [length]

13.2 WSDL

WSDL:

http://api.rkd.reuters.com/schemas/DocSearch/wSDL/DocSearch_1_HttpAndRKDToken.wsdl

13.3 Performing a Simple Query

Many applications provide users with a "bulletin board" of the most recent research document contributions. You can easily generate this data by making a new submissions query.

Note: "newSubmissions" is the default date range and is, by default, 1 day back. You can use the `<bbDaysBack>` element to change this range. For example `<bbDaysBack>2</bbDaysBack>` defines "newSubmissions" as 2 days back.

The following XML example shows a request of metadata for 10 recently submitted documents:

XML Sample Request - Performing a Request for 10 Recently Submitted Documents

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/DocSearch/DocSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1/DocSearch_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <DocSearch_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1"
      dateRange="newSubmissions"
      maxRows="10">
    </DocSearch_Request_1>
  </Body>
</Envelope>

```

Attribute	Description
dateRange	The date range of the document headlines to be returned. For a "newSubmissions" search, the API selects documents based on the date that the documents arrived at Thomson Reuters ("arriveDate"). For other searches, the API uses the release date contributed by the client ("releaseDate").
maxRows	The maximum number of document headlines to be returned - in this example the request is for a maximum of 10. Note: Max value for maxRows is 10000.

Note: If the <maxRowsToAbort> attribute is set bigger than 2000, then system will reset it to 2000 (max value handled by system).

If the number of records to be returned is greater than <maxRowsToAbort>, system will respond with 'DocSearch_TooGeneric' RKD fault.

For example, if you have specified the following criteria

XML Sample

```
<maxRowsToAbort="500" and maxRows="50"
```

keep in mind that the <maxRows> attribute is only for paging, which means that if 400 records satisfy the specified criteria then system will send back only 50 records. But if 600 records satisfy the specified criteria, you will receive a "too much data" exception.

13.3.1 Using Other Date Ranges

You can use the <dateRange> attribute to specify "today", "thisWeek", for example. You can also use <dateRange>="customDate" along with <dateFrom>YYYY-MM-DD</dateFrom> and <dateTo>YYYY-MM-DD</dateTo> to specify a custom range.

Note: A "newSubmissions" search uses the "arriveDate" date stamp. All other searches use "releaseDate". See section Understanding Document Dates and Ordering for more details.

13.4 Interpreting the Document Search Response

The following is a typical document search response:

XML Sample Request - Interpreting the Document Search Request

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>

```



```

<To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/DocSearch/DocSearch.svc</To>
<MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
<Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2007/01/12/webservices/rkd/DocSearch_1/
DocSearch_1</Action>
<Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
  <ApplicationID>[AppID]</ApplicationID>
  <Token>[Impersonation Token]</Token>
</Authorization>
</Header>
<Body>
  <DocSearch_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1"
    <diDef docID="28673918" ctbID="20780" companyName="Multex Research Desk" fileType="url" fileName="http://www.
    multexusa.com/mrd_daily.asp" fileSize="0" price="0" pages="0" hasSyn="0" ndOvw="0" tocStart="-1" tocEnd="-1" docClass="MR"
    releaseDate="2003-03-07T01:00:00" submitDate="2003-03-07T15:10:00" arriveDate="2003-03-07T15:10:05" localCode
    ="9120020712190622">
      <headline>Multex At A Glance - Companies Reporting - March 10, 2003</headline>
      <tkr prtID="100034300">ALXN=US</tkr>
      <tkr prtID="100070420">CWG=US</tkr>
      <reg c="NAM">North America</reg>
      <reg c="NAM">North America</reg>
      <docTyp c="1100">EQUITY</docTyp>
      <docTypG c="1100">EQUITY</docTypG>
      <cntry c="CAN">Canada</cntry>
      <cntry c="USA">United States</cntry>
      <crncy c="USD">U.S. Dollar</crncy>
      <grp uid="70005269">1</grp>
      <grp uid="70005418">4</grp>
      <langDesc lang="en" rfc1766="en">English</langDesc>
      <ctSubjectsResp c="">MXCO</ctSubjectsResp>
      <disciplinesResp c="">DIS_FUND</disciplinesResp>
      <rptStylesResp c="">RPT_CO</rptStylesResp>
      <Restriction underRestriction="0" underReview="0"
        underExtendedReview="0"/>
    </diDef>
  </DocSearch_Request_1>
</Body>
</Envelope>

```

Attribute	Description
diDef	Each <diDef/> element contains all the metadata for a document matching the search criteria.
releaseDate submitDate arriveDate	Each document metadata includes <releaseDate>, <submitDate>, and <arriveDate>. For more information, see section Understanding Document Dates and Ordering.
prtID	Documents about a particular company are tagged by ticker and Thomson Reuters identifier or "parent ID" (MXID). For additional information, see section Searching for Documents about a Particular Company.
reg	Additional contributed metadata includes region, and language, for example.
Restriction	The TRKD API can be configured to return restriction information about documents.

13.4.1 Understanding Document Dates and Ordering

Each document metadata includes <releaseDate>, <submitDate>, and <arriveDate>.

- **releaseDate** The date the contributor specifies upon contribution. releaseDate is the only date the contributor can actually declare. The date is simply the declared, unadjusted publication date of the document and should agree with the publication date in the document. This is the date used by all searches except "newSubmissions" search. You should assume this date is in GMT format, however, contributors can use another date/time format if they choose.
- **submitDate** The date and time, in GMT format, Thomson Reuters actually received the document.
- **arriveDate** Also known as "update date". The date and time, in GMT format, when insertion occurs into the master SQL database - that is, contribution is complete and the document is available. This is the date used by a "newSubmissions" search. Note that "newSubmissions" is, by default, 1 day back. You can use the bbDaysBack element to change this range. For example, <bbDaysBack>2</bbDaysBack> defines "newSubmissions" as 2 days back.



13.5 Samples of Document Search Requests

This section contains samples of requests available in the TRKD API for searching for documents. These requests are:

- **Document IDs** (DocIDs_1): Retrieves document IDs.
- **Document Information** (DocInfo_1): Retrieves information about a specific document.
- **Document Search** (DocSearch_1): Searches for a document using various criteria.
- **Documents Count** (DocCount_1): Shows the number of documents that match search criteria.
- **Document Summary** (DocSummary_1): Retrieves the document summary.
- **Fts Document IDs** (FtsDocIDs_1): Retrieves Document IDs using full text search.
- **Fts Documents Count** (FtsDocCount_1): Shows the number of documents that match full text search criteria.
- **Fts Documents Search** (FtsDocSearch_1): Performs a full text search for a document using various criteria.
- **Batch Request** (Batch_1): Can perform a request that can include several document search requests seen above in one call.
- **Search Keyword** (DocSearchKeyword_1): Retrieves the context in which a search term appears (i.e. the 20 words either side of the search term).
- **Table of Contents** (DocTableOfContents_1): Retrieves a table of contents for the research report.

Currently, Document Search requests are divided into two groups:

- Structured searches that apply DocID parameters but do not apply matchStr parameter;
- Full Text Searches (with the prefix FTS) that apply matchStr parameter but do not apply DocID parameters.

13.5.1 Document IDs (DocIDs_1)

The DocIDs_1 request is used to retrieve document IDs.

The example below shows how to retrieve document IDs for new submissions.

XML Sample Request - Retrieving Document IDs

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/DocSearch/DocSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1/DocIDs_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <DocIDs_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1" dateRange="newSubmissions" />
  </Body>
</Envelope>
```

XML Sample Response - Retrieving Document IDs

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1/DocIDs_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <DocIDs_Response_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1">
      <id>41958041</id>
      <id>41958038</id>
      <id>41958017</id>
      <id>41958003</id>
      ...
      <id>41957041</id>
    </DocIDs_Response_1>
  </Body>
</Envelope>
```



```

    <id>41957036</id>
    <id>41957030</id>
  </DocIDs_Response_1>

</Body>
</Envelope>

```

13.5.2 Document Information (DocInfo_1)

The DocInfo_1 request is used to retrieve information about a specific document.

The example below shows how to retrieve document information of a document with the docID "41737698".

XML Sample Request - Retrieving Document Information

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/DocSearch/DocSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1/DocInfo_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <DocInfo_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1" acceptLanguage="en" calcPrice="true" synCharsRequired="350" req_id="345">
      <docID>43032783</docID>
    </DocInfo_Request_1>
  </Body>
</Envelope>

```

Attribute	Description
acceptLanguage	This element allows you to retrieve the document in the language you specify.
calcPrice	This indicates whether the response must show document price or not. The possible values are: - true - false
synCharsRequired	This value indicates the synopsis length (in characters) you want to receive in the response.
req_id	This value shows ID of the request.
docID	This value is the unique Document ID.

XML Sample Response - Retrieving Document Information

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/rkd/DocSearch_1/DocInfo_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <DocInfo_Response_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1" req_id="345">
      <diDef arriveDate="2008-07-31T07:03:33" companyName="Alfa Bank" ctbID="20486" docClass="MN" docID="43032783" fileExt="pdf" fileName="43032783.pdf" fileSize="235777" fileType="pdf" hasEarns="false" hasSyn="true" indOvw="false" pages="16" price="0" releaseDate="2008-07-31T11:02:00" submitDate="2008-07-31T07:03:00" tocEnd="-1" tocStart="-1" transpRpt="false">
        <headline>ALFA BANK Morning Brief: Macroeconomics, DisCos, Bank Forum, Zaporizhstal</headline>
        <reg c="EUR">Europe</reg>
        <regG c="EUR">Europe</regG>
        <subj c="MRNC">MORNING COMMENTS</subj>
        <subjG c="MRNC">MORNING COMMENTS</subjG>
      </diDef>
    </DocInfo_Response_1>
  </Body>
</Envelope>

```




```

<docTyp c="1120">EQUITY- MARKET</docTyp>
<docTypG c="1120">EQUITY- MARKET</docTypG>
<ind c="660">Utilities</ind>
<ind c="480">Metals & Minerals</ind>
<ind c="170">Banks</ind>
<indG c="660">Utilities</indG>
<indG c="480">Metals & Minerals</indG>
<indG c="170">Banks</indG>
<cntry c="UA">Ukraine</cntry>
<cntry c="RUS">Russian Federation</cntry>
<grp uid="70008251">3</grp>
<grp uid="70005113">1</grp>
<langDesc lang="en" rfc1766="en">English</langDesc>
<ctSubjectsResp uid="120000014">MXCO</ctSubjectsResp>
<disciplinesResp uid="130000002">DIS_FUND</disciplinesResp>
<reasonsResp uid="140000001">REA_COMM</reasonsResp>
<rptStylesResp uid="150000002">RPT_CO</rptStylesResp>
<synopsis>Russian Market Market Comment, Looking to build on the bounce The rebound in oil and resilient US markets suggest a continuation of yesterday's bounce on the local market. The preliminary reading of second-quarter US GDP and initial jobless claims will then set the tone of trade in the late afternoon. Top Stories Macroeconomics: CPI likely to re</synopsis>
</diDef>
</DocInfo_Response_1>
</Body>
</Envelope>

```

13.5.3 Documents Count (DocCount_1)

The DocCount_1 request shows the number of documents that match the specified search criteria.

The example below retrieves the document count for documents marked with country name (USA) in new submissions.

XML Sample Request - Retrieving Documents Count

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/DocSearch/DocSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1/DocCount_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <DocCount_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1" dateRange="newSubmissions">
      <country>USA</country>
    </DocCount_Request_1>
  </Body>
</Envelope>

```

XML Sample Response - Retrieving Documents Count

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1/DocCount_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <DocCount_Response_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1">
      <count>247</count>
    </DocCount_Response_1>
  </Body>
</Envelope>

```



13.5.4 Documents Search (DocSearch_1)

The DocSearch_1 request is used to search for a document using various criteria.

The following example shows how to search for a document with the docID 41737709.

XML Sample Request - Performing Document Search

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/DocSearch/DocSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1/DocSearch_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <DocSearch_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1">
      <docID>41737709</docID>
    </DocSearch_Request_1>
  </Body>
</Envelope>
```

Note: Please note that the <excludeRixmlDocs> attribute found in Request Modifiers is not currently used. It is reserved for future development.

The complete list of all available parameters that can be used in a DocSearch_1 request can be found in the DocSearch_1 Request Parameters section at the end of this chapter.

Note: The parameter acceptLanguage="en" does not perform search by documents in English, but returns response with the elements' values in English (if there are any). To search for the document in English use the <langID> parameter.

The response also returns the RIC of the companies covered in research documents along with tickers.

XML Sample Response - Performing Document Search

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1/DocSearch_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <DocSearch_Response_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1">
      <diDef arriveDate="2008-02-27T11:01:22" companyName="Ibersecurities" ctbID="8707" docClass="MR" docID="41737709"
        fileExt="pdf" fileName="41737709.pdf" fileSize="173169" fileType="pdf" hasEarnings="false" hasSyn="true" indOvw="false"
        localCode="3052" pages="14" price="0" releaseDate="2008-02-27T06:00:00" submitDate="2008-02-27T11:01:00" tocEnd="-1"
        tocStart="-1" transpRpt="false">
        <headline>IBERIAN DAILY 27 FEBRUARY (IBERSECURITIES SV)</headline>
        <pTkr prtID="100005771">ACX=ES</pTkr>
        <tkr prtID="100005771">ACX=ES</tkr>
        <author c="16CL">Nicolas Fernandez</author>
        <author c="3PU8">Agustin Alberti</author>
        <author c="41E8">Jean Baptiste Bruny</author>
        <author c="421K">Laura Benito</author>
        <author c="3X7G">María Cebollero</author>
        <author c="1SD7">Glen S. Chapman</author>
        <author c="3OQ6">Jesus Dominguez</author>
        <author c="3X7F">Clara Espino</author>
        <author c="3X7D">Javier Esteban</author>
      </diDef>
    </DocSearch_Response_1>
  </Body>
</Envelope>
```



```

<author c="421L">Manuel Gallego</author>
<author c="3OPT">Jorge Gonzalez</author>
<author c="41E4">Leon Izuzquiza</author>
<author c="3FS8">Mario Lodos</author>
<author c="3X7C">Francisco Rodríguez</author>
<author c="3X7E">Ignacio Romero</author>
<author c="421M">Beatrix Tejero</author>
<reg c="EUR">Europe</reg>
<reg c="ERL">Euroland</reg>
<regG c="EUR">Europe</regG>
<regG c="ERL">Euroland</regG>
<subj c="COM">COMPANY UPDATE</subj>
<subjG c="COM">COMPANY UPDATE</subjG>
<docTyp c="1100">EQUITY</docTyp>
<docTypG c="1100">EQUITY</docTypG>
<cntry c="ESP">Spain</cntry>
<grp uid="70001276">2</grp>
<grp uid="70001187">1</grp>
<langDesc lang="en" rfc1766="en">English</langDesc>
<ctSubjectsResp uid="120000020">MXCOFN</ctSubjectsResp>
<ctSubjectsResp uid="120000014">MXCO</ctSubjectsResp>
<disciplinesResp uid="130000002">DIS_FUND</disciplinesResp>
<reasonsResp uid="140000010">REA_PER</reasonsResp>
<rptStylesResp uid="150000002">RPT_CO</rptStylesResp>
</diDef>
</DocSearch_Response_1>
</Body>
</Envelope>

```

13.5.5 Documents Summary (DocSummary_1)

The DocSummary_1 request is used to retrieve document summary.

The following example shows how to retrieve document summary for the specified docID.

XML Sample Request - Retrieving Document Summary

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/DocSearch/DocSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1/DocSummary_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <DocSummary_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1">
      <docID>41737709</docID>
    </DocSummary_Request_1>
  </Body>
</Envelope>

```

XML Sample Response - Retrieving Document Summary

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1/DocSummary_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <DocSummary_Response_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1">
      <ctbSum companyID="8707" companyName="Ibersecurities" mnCnt="0" mrCnt="1" />
    </DocSummary_Response_1>
  </Body>
</Envelope>

```



```

</DocSummary_Response_1>
</Body>
</Envelope>

```

13.5.6 Fts Document IDs (FtsDocIDs_1)

The FtsDocIDs_1 request is used to retrieve document IDs using full text search.

The following example shows how to perform a full text search for document IDs in new submissions for the last two days where text contains 'microsoft'.

XML Sample Request - Retrieving Fts Document IDs

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/DocSearch/DocSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1/FtsDocIDs_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <FtsDocIDs_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1" dateRange="newSubmissions">
      <bbDaysBack>2</bbDaysBack>
      <matchStr relevance="1" strSrc="text">microsoft</matchStr>
    </FtsDocIDs_Request_1>
  </Body>
</Envelope>

```

XML Sample Response - Retrieving Fts Document IDs

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1/FtsDocIDs_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <FtsDocIDs_Response_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1">
      <id>41949954</id>
      <id>41949963</id>
      ...
      <id>41956623</id>
      <id>41956648</id>
    </FtsDocIDs_Response_1>
  </Body>
</Envelope>

```

Note: Full Text Search supports **only Roman characters**. Other characters like Cyrillic, Arabic, hieroglyphs are ignored in Document Search service.

13.5.7 Fts Documents Count (FtsDocCount_1)

The following example shows how to perform a full text search for documents containing the specified data.

XML Sample Request - Retrieving Fts Documents Count



```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/DocSearch/DocSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1/
      FtsDocCount_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <FtsDocCount_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1" dateRange="newSubmissions"
      ">
      <matchStr relevance="1">Yahoo</matchStr>
    </FtsDocCount_Request_1>
  </Body>
</Envelope>

```

XML Sample Response - Retrieving Fts Documents Count

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/01/12/webservices/
      rkd/DocSearch_1/FtsDocCount_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <FtsDocCount_Response_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1">
      <count>2</count>
    </FtsDocCount_Response_1>
  </Body>
</Envelope>

```

Note: Full Text Search supports **only Roman characters**. Other characters like Cyrillic, Arabic, hieroglyphs are ignored in Document Search service.

13.5.8 Fts Documents Search (FtsDocSearch_1)

FtsDocSearch_1 request is used to perform a full text search for a document using various criteria.

Note: Full Text Search supports **only Roman characters**. Other characters like Cyrillic, Arabic, hieroglyphs are ignored in Document Search service.

The following example shows how to perform a full text search for a document containing the "Egypt Market Review" phrase.

XML Sample Request - Performing Fts Document Search

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/DocSearch/DocSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1/
      FtsDocSearch_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <FtsDocSearch_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1">
      <matchStr strSrc="text">"Egypt Market Review"</matchStr>
    </FtsDocSearch_Request_1>
  </Body>
</Envelope>

```



```
</Envelope>
```

The request returns the following information:

XML Sample Response - Performing Fts Documents Search

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/01/12/webservices/
rkd/DocSearch_1/FtsDocSearch_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <FtsDocSearch_Response_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1">
      <diDef arriveDate="2008-03-24T14:28:05" companyName="HC Brokerage" ctbID="29328" docClass="MR" docID="41958309"
fileName="41958309.pdf" fileSize="182850" fileType="pdf" hasEarnings="false" indOvw="false" price="0" releaseDate="2008-03-
24T10:27:00" submitDate="2008-03-24T14:28:00" tocEnd="-1" tocStart="-1" transpRpt="false" fileExt="pdf" hasSyn="true"
localCode="2512" pages="4" relevance="293">
        <headline>HC Brokerage: Egypt Market Review March 24 2008</headline>
        <tkr prtID="100103804">WCDF=EG</tkr>
        ...
        <tkr prtID="100211386">ORTE=EG</tkr>
        <tkr>ORHD=EG</tkr>
        ...
        <tkr>=US</tkr>
        <author c="3M4Y">Nemat Allah Choucri</author>
        <author c="40KQ">Hatem Alaa</author>
        <reg c="MST">Middle East</reg>
        <regG c="MST">Middle East</regG>
        <subj c="RAT">RATINGS CHANGES</subj>
        <subj c="PRC">PRICE</subj>
        <subj c="OPR">OPERATING RESULTS</subj>
        <subj c="EPS">ESTIMATE CHANGES</subj>
        <subjG c="RAT">RATINGS CHANGES</subjG>
        <subjG c="PRC">PRICE</subjG>
        <subjG c="OPR">OPERATING RESULTS</subjG>
        <subjG c="EPS">ESTIMATE CHANGES</subjG>
        <docTyp c="1010">ECONOMICS</docTyp>
        <docTypG c="1010">ECONOMICS</docTypG>
        <ind c="660">Utilities</ind>
        ...
        <indG c="235">Consumer</indG>
        <cntry c="EGY">Egypt</cntry>
        <grp uid="70007531">1</grp>
        <langDesc rfc1766="en" lang="en">English</langDesc>
        <ctSubjectsResp uid="120000034">MXEC</ctSubjectsResp>
        <ctSubjectsResp uid="120000013">MXCN</ctSubjectsResp>
        <disciplinesResp uid="130000002">DIS_FUND</disciplinesResp>
        <reasonsResp uid="140000001">REA_COMM</reasonsResp>
        <rptStylesResp uid="150000006">RPT_ECON</rptStylesResp>
      </diDef>
    </FtsDocSearch_Response_1>
  </Body>
</Envelope>
```

Note: If the <maxRowsToAbort> attribute is set bigger than 2000, then system will reset it to 2000 (max value handled by system).

If the number of records to be returned is greater than <maxRowsToAbort>, system will respond with 'DocSearch_TooGeneric' RKD fault.

For example, if you have specified the following criteria

XML Sample

```
<maxRowsToAbort="500" and maxRows="50"
```

keep in mind that the <maxRows> attribute is only for paging, which means that if 400 records satisfy the specified criteria then system will send back only 50 records. But if 600 records satisfy the specified criteria, you will receive a "too much data"



exception.

Some tips on Fts Document Search:

- To search headline only use the following:

XML Sample

```
<matchStr strSrc="hdln">qwerty</matchStr>
```

- To search both text and headline use the following:

XML Sample

```
<matchStr strSrc="text">qwerty</matchStr>
<matchStr strSrc="hdln">qwerty</matchStr>
```

- To search in the text use the following:

XML Sample

```
<matchStr strSrc="hdln">qwerty</matchStr>
```

All searches go against Fulcrum, even headlines searches. When search goes against Fulcrum it retrieves a vector of document ids that satisfy the given criteria. All document attributes (including cat codes) are taken from SQL Server using the vector of docids retrieved from the Fulcrum.

13.5.9 Batch Request (Batch_1)

The Batch_1 request is used to perform a request that can include several document search requests in one call.

This sample query batches three requests for retrieving information for the documents with the following docIDs: 41737698, 41737704 and 41736916.

XML Sample Request - Batch Request

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/DocSearch/DocSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1/
    Batch_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <Batch_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1">
      <DocInfo_Request_1 calcPrice="false" synCharsRequired="1">
        <docID>41737698</docID>
      </DocInfo_Request_1>
      <DocInfo_Request_1>
        <docID>41737704</docID>
      </DocInfo_Request_1>
      <DocInfo_Request_1 acceptLanguage="en" calcPrice="true" synCharsRequired="0">
        <docID>41736916</docID>
      </DocInfo_Request_1>
    </Batch_Request_1>
  </Body>
</Envelope>
```

The following query batches two requests for retrieving document summary and document count.

XML Sample Request - Batch Request



```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/2008/01/12/DocSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1/
    Batch_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <Batch_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1">
      <DocSummary_Request_1 dateRange="today" req_id="1" />
      <DocCount_Request_1 dateRange="today" req_id="2" />
    </Batch_Request_1>
  </Body>
</Envelope>
```

XML Sample Response - Batch Request

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/01/12/webservices/
    rkd/DocSearch_1/Batch_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <Batch_Response_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1">
      <DocSummary_Response_1 req_id="1">
        <ctbSum companyID="39612" companyName="Abu Dhabi Investment Company (ADIC)" mnCnt="0" mrCnt="1"></ctbSum>
        <ctbSum companyID="29444" companyName="Affin Securities Sdn. Bhd." mnCnt="0" mrCnt="4"></ctbSum>
        <ctbSum companyID="19717" companyName="Aizawa Securities Co., Ltd" mnCnt="0" mrCnt="1"></ctbSum>
        <ctbSum companyID="34730" companyName="AL Habib Capital Markets (Private) Limited" mnCnt="1" mrCnt="0"></ctbSum>
        <ctbSum companyID="20486" companyName="Alfa Bank" mnCnt="1" mrCnt="0"></ctbSum>
        <ctbSum companyID="37792" companyName="Alpha Finance Romania S.A" mnCnt="1" mrCnt="0"></ctbSum>
        <ctbSum companyID="22229" companyName="Aqeel Karim Dhedhi Securities (Pvt) Ltd" mnCnt="0" mrCnt="1"></ctbSum>
        <ctbSum companyID="8358" companyName="Arab Malaysia Securities Sdn Bhd" mnCnt="0" mrCnt="7"></ctbSum>
        <ctbSum companyID="19080" companyName="ATR-Kim Eng Securities Inc." mnCnt="0" mrCnt="1"></ctbSum>
        ...
        <ctbSum companyID="31769" companyName="TAIB Securities W.L.L" mnCnt="0" mrCnt="1"></ctbSum>
        <ctbSum companyID="5706" companyName="Theodoor Gilissen Securities" mnCnt="0" mrCnt="2"></ctbSum>
        <ctbSum companyID="20981" companyName="Thomson StreetEvents" mnCnt="0" mrCnt="17"></ctbSum>
        <ctbSum companyID="30254" companyName="Tong Yang Securities" mnCnt="2" mrCnt="9"></ctbSum>
        <ctbSum companyID="35007" companyName="UOB Kay Hian Securities (Thailand) Public Company Limited" mnCnt="0"
        mrCnt="4"></ctbSum>
        <ctbSum companyID="41335" companyName="Viet Capital Securities Joint Stock Company (VCSC)" mnCnt="1" mrCnt="0"></
        ctbSum>
        <ctbSum companyID="4394" companyName="Wilson HTM Ltd., Australia" mnCnt="0" mrCnt="7"></ctbSum>
        <ctbSum companyID="19919" companyName="Wolfgang Steubing AG" mnCnt="0" mrCnt="1"></ctbSum>
        <ctbSum companyID="14236" companyName="Wood & Company" mnCnt="0" mrCnt="1"></ctbSum>
        <ctbSum companyID="17150" companyName="Woori Investment & Securities" mnCnt="0" mrCnt="2"></ctbSum>
        <ctbSum companyID="22482" companyName="Yuanta Investment Consulting" mnCnt="0" mrCnt="1"></ctbSum>
      </DocSummary_Response_1>
      <DocCount_Response_1 req_id="2">
        <count>359</count>
      </DocCount_Response_1>
    </Batch_Response_1>
  </Body>
</Envelope>
```

13.5.10 Search Keyword (DocSearchKeyword_1)

A keyword search returns headlines and other metadata for documents containing the specific text. In addition, to allow your users to see how the search text appears in the document, you can use the DocSearchKeyword_1 request to return page



numbers and context snippets associated with the search text.

First, use the FtsDocSearch_1 request to find documents containing the search text. For example:

XML Sample Request - Searching for Documents

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/DocSearch/DocSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1/
      FtsDocSearch_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <FtsDocSearch_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1" maxRows="1"
      dateRange="newSubmissions">
      <matchStr>Europe</matchStr>
    </FtsDocSearch_Request_1>
  </Body>
</Envelope>
```

For these documents, use the docID and the same search text for the DocSearchKeyword_1 request:

XML Sample Request - Document Keyword Search

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/2008/01/12/DocSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1/
      DocSearchKeyword_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <DocSearchKeyword_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1"
      searchMethod="anyKeyword">
      <docId>46993916</docId>
      <searchText>Europe</searchText>
    </DocSearchKeyword_Request_1>
  </Body>
</Envelope>
```

The following **searchMethods** are available: All keywords, Any keyword and Entire phrase.

TRKD API returns page numbers and context snippets. For example:

XML Sample Response - Document Keyword Search

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/01/12/webservices/
      rkd/DocSearch_1/DocSearchKeyword_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <DocSearchKeyword_Response_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1">
      <KeywordSearchResult>
```



```

    <Page no="21">
      <Text>10036- 8293 United States Tel: + 1 ( 1) 212 761 4000 Europe 20 Bank Street, Canary Wharf London E14 4AD</Text>
    </Page>
  </KeywordSearchResult>
</DocSearchKeyword_Response_1>

</Body>
</Envelope>

```

13.5.11 Table of Contents (DocTableOfContents_1)

Another feature offered by TRKD API is the ability to retrieve a document's TOC (Table of Contents). A Document ID of the document being searched for is required to retrieve the TOC. You can use this request to retrieve a table of contents for the research report before downloading it.

Note: TOC page numbering starts from 0.

The following example shows how to search for a document with the docID 46993916.

XML Sample Request - Retrieving Table of Contents

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/DocSearch/DocSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1/DocTableOfContents_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <DocTableOfContents_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1">
      <docID>46993916</docID>
    </DocTableOfContents_Request_1>
  </Body>
</Envelope>

```

The response returns the following information:

XML Sample Response - Retrieving Table of Contents

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1/DocTableOfContents_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <DocTableOfContents_Response_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1">
      <TableOfContents docID="46993916" ctbID="2975" pages="22">
        <headline>Japan Economics: Japan Briefing (Nov 2-13): Entering Soft Patch Amid Mixed Data</headline>
        <titem page="3">
          <tl>Bank Lending & Money Stock (October) November 10, 2009</tl>
        </titem>
        <titem page="6">
          <tl>Economy Watchers Survey (October) November 10, 2009</tl>
        </titem>
        <titem page="9">
          <tl>Machinery Orders (September Results, Oct-Dec Outlook) November 11, 2009</tl>
        </titem>
        <titem page="16">
          <tl>Economic Data Calendar: Nov 16-20: GDP, TIAI, AIAI</tl>
          <titem page="16">
            <tl>Main Economic Indicator Calendar</tl>
          </titem>
        </titem>
      </TableOfContents>
    </DocTableOfContents_Response_1>
  </Body>
</Envelope>

```



```

        </item>
        <item page="16">
          <tl>Main Economic Events</tl>
        </item>
        <item page="17">
          <tl>Key Economic Data Forecast</tl>
        </item>
        <item page="19">
          <tl>Main Economic Indicators</tl>
        </item>
      </item>
      <item page="20">
        <tl>Forecast Summary September 11, 2009</tl>
      </item>
    </TableOfContents>
  </DocTableOfContents_Response_1>
</Body>
</Envelope>

```

Attribute	Description
headline	Contains the headline of the document.
item	Contains the attribute "page" that indicates the page of the TOC item in the document. It also contains the element <tl>.
tl	The heading of the item in the table of contents.

13.5.12 Get Snapshot Table of Contents (GetSnapshotTOC_1)

Use the GetSnapshotTOC_1 request to retrieve TOC (Table of Contents) for Research Snapshot documents before downloading it. A Document ID of the snapshot document is required to retrieve the TOC.

Note: TOC page numbering starts from 0.

The following example shows how to retrieve TOC for the snapshot document with the docID 47196070.

XML Sample Request - Retrieving Snapshot Table of Contents

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/DocSearch/DocSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1/GetSnapshotTOC_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetSnapshotTOC_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1">
      <docID>47196070</docID>
    </GetSnapshotTOC_Request_1>
  </Body>
</Envelope>

```

The response returns the following information:

XML Sample Response - Retrieving Snapshot Table of Contents

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1/GetSnapshotTOC_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <GetSnapshotTOC_Response_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1">
      <TableOfContents>
        <TableOfContentsItem>
          <tl>Main Economic Events</tl>
          <page>16</page>
        </TableOfContentsItem>
        <TableOfContentsItem>
          <tl>Key Economic Data Forecast</tl>
          <page>17</page>
        </TableOfContentsItem>
        <TableOfContentsItem>
          <tl>Main Economic Indicators</tl>
          <page>19</page>
        </TableOfContentsItem>
        <TableOfContentsItem>
          <tl>Forecast Summary September 11, 2009</tl>
          <page>20</page>
        </TableOfContentsItem>
      </TableOfContents>
    </GetSnapshotTOC_Response_1>
  </Body>
</Envelope>

```



```

</Header>
<Body>
  <GetSnapshotTOC_Response_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1">
    <TableOfContents docID="47196070" ctblID="2182" pages="7">
      <headline>Anatolia Minerals Development - Copler Mine Construction Update</headline>
      <titem page="1">
        <tl>PRICE TARGET REVISION</tl>
      </titem>
      <titem page="1">
        <tl>Anatolia Minerals Development</tl>
      </titem>
      <titem page="4">
        <tl>Speculative Risk (SR</tl>
      </titem>
      <titem page="4">
        <tl>execution risk</tl>
      </titem>
    </TableOfContents>
  </GetSnapshotTOC_Response_1>
</Body>
</Envelope>

```

Attribute	Description
headline	Contains the headline of the document.
titem	Contains the attribute "page" that indicates the page of the TOC item in the document. It also contains the element <tl>.
tl	The heading of the item in the table of contents.

13.5.13 Get Fts Document Portfolio Summary (FtsDocPortfolioSummary_1)

Use the FtsDocPortfolioSummary_1 request to get the documents count per company (ticker) specified in the request using full-text search functionality. For example, to retrieve number of documents that contain the specified text per company.

The following example shows retrieves total number of documents for the last week for the specified tickers and containing 'Europe' text:

XML Sample Request - Retrieving Fts Document Portfolio Summary

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/DocSearch/DocSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1/FtsDocPortfolioSummary_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <FtsDocPortfolioSummary_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1"
      dateRange="lastWeek" tkrPrimary="true" maxRows="50" tkrEncoding="prtID">
      <sort s_c="portfolioCount" s_d="desc" />
      <ticker>100031056,100031627,100031703,100031826,100031907</ticker>
      <matchStr>Europe</matchStr>
    </FtsDocPortfolioSummary_Request_1>
  </Body>
</Envelope>

```

The response returns total number of documents for the specified tickers that contain the specified text:

XML Sample Response - Retrieving Fts Document Portfolio Summary



```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/01/12/webservices/
    rkd/DocSearch_1/FtsDocPortfolioSummary_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <FtsDocPortfolioSummary_Response_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1">
      <portfolioSum docCnt="8" parentID="100031826" tickerName="SAP AG"></portfolioSum>
      <portfolioSum docCnt="5" parentID="100031703" tickerName="AT&T Inc"></portfolioSum>
      <portfolioSum docCnt="4" parentID="100031056" tickerName="British Sky Broadcasting Group PLC"></portfolioSum>
      <portfolioSum docCnt="2" parentID="100031627" tickerName="Macy's Inc"></portfolioSum>
    </FtsDocPortfolioSummary_Response_1>
  </Body>
</Envelope>

```

13.5.14 Get Document Portfolio Summary (DocPortfolioSummary_1)

Use the DocPortfolioSummary_1 request to get the documents count per company (ticker) that match the specified search criteria (for example, a number of documents for the two companies over the last month).

The following example shows how to retrieve total number of documents for the last week for the specified companies (tickers):

XML Sample Request - Retrieving Document Portfolio Summary

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/DocSearch/DocSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1/
    DocPortfolioSummary_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <DocPortfolioSummary_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1" dateRange="lastWeek"
    tkrPrimary="true" maxRows="50" tkrEncoding="prtID">
      <sort s_c="portfolioCount" s_d="desc" />
      <ticker>100031056,100031627,100031703,100031826,100031907</ticker>
    </DocPortfolioSummary_Request_1>
  </Body>
</Envelope>

```

The response returns total number of documents for the specified tickers and ticker names:

XML Sample Response - Retrieving Document Portfolio Summary

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/01/12/webservices/
    rkd/DocSearch_1/DocPortfolioSummary_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <DocPortfolioSummary_Response_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1">
      <portfolioSum docCnt="24" parentID="100031703" tickerName="AT&T Inc"></portfolioSum>
      <portfolioSum docCnt="17" parentID="100031826" tickerName="SAP AG"></portfolioSum>
      <portfolioSum docCnt="15" parentID="100031627" tickerName="Macy's Inc"></portfolioSum>
      <portfolioSum docCnt="11" parentID="100031056" tickerName="British Sky Broadcasting Group PLC"></portfolioSum>
      <portfolioSum docCnt="1" parentID="100031907" tickerName="Casino Guichard Perrachon SA"></portfolioSum>
    </DocPortfolioSummary_Response_1>
  </Body>
</Envelope>

```



```
</Body>
</Envelope>
```

13.5.15 DocSearch_1 Request Parameters

The table below lists all available request parameters for the DocSearch_1 request.

Parameter	Description
docID	Contains unique Documents ID.
ctbDocIDs	Contains Contributor Document ID.
langID	Language identifier. To search for the document in a specific language use the <langID> parameter.
bbDaysBack	Shows the count of days that dataRange should run back. Note that "newSubmissions" is, by default, 1 day back. You can use the bbDaysBack element to change this range. For example, <bbDaysBack>2</bbDaysBack> defines "newSubmissions" as 2 days back.
auxData	Auxiliary data. In some cases, contributors need to tag contributed documents with data that does not fit in the standard set (ticker, industry, analyst, and others); for example, there may be documents referring to a particular event. Thomson Reuters includes this contributor specific data as "auxiliary data". To search for documents tagged with particular auxiliary data, use the <auxData/> element. For example, to search for "Multex Research Desk" (contributor 20780) documents tagged with auxiliary code 555.
finalCtbType	Specifies the identifier of document type. Available IDs: 1(PDF), 2(TEXT), 3(EXCEL), 4(WEBSITE), 5(URL) and other.
pagingHint	pagingHint: By specifying the hintStr and docID of the last record on the previous page you are able to retrieve the next page. hintStr should contain values defined by the following rules: If you sort by date and the query is newSubmissions, then hintStr= arriveDate of the last doc in the previous query, formatted time_t (# of seconds since 01/01/1970). For any other query sorted by date, hintStr = releaseDate of the last doc in the previous query, formatted time_t (# of seconds since 01/01/1970). If you sort by primaryTicker, then hintStr = pTck of the last doc in the previous query. If you sort by pages, then hintStr = pages of the last doc in the previous query.
dateFrom	You can also use <dateRange>="customDate" along with <dateFrom>YYYY-MM-DD</dateFrom> and <dateTo>YYYY-MM-DD</dateTo> to specify a custom range.
dateTo	You can also use <dateRange>="customDate" along with <dateFrom>YYYY-MM-DD</dateFrom> and <dateTo>YYYY-MM-DD</dateTo> to specify a custom range.
sort	The sort element allows you to control how the document headlines are sorted. The <s_c> attribute allows you to sort by date, score, pages, and the primary ticker. The <s_d> attribute allows you to control whether the document headlines are sorted in ascending or descending order.
excludeCtbs	True/False (include/exclude contributors).
ctbs	Use the <excludeCtbs/> and <ctbs/> elements to include or exclude contributors. The <excludeCtbs>1</excludeCtbs> elements cause the query to exclude the contributors in <ctbs/>. To designate multiple contributors, use a comma separated list inside <ctbs/>.
ctbsm	This value determines the category of contributors. The possible values are: • brokers • independents • allCtbs The possible actions are: • include • exclude For example: <ctbsm category="allCtbs" action="exclude">20780</ctbsm>.
ticker	This shows company's ticker. The SEDOLs, CUSIPs, and symbols that are to be used by the symbology server to obtain the MXIDs.
docType	Type of document. Available values: R - Market research and MN - morning note. Response contains attribute "docClass" that return: - "MR" if "docType" = R - "MN" if "docType" = MN
analystSet	Many contributors have their own designations for analysts, industries, subjects, regions, and categories.



	You can use these local codes by first specifying the "code set". To specify an analyst code set, use the alpha numeric set code. For example, to use local contributor analyst codes from the fictitious Acme Inc. (AI#001), use <code><analystSet>AI#001</analystSet><analysts>ABC</analysts></code> .
analyst	Many contributors have their own designations for analysts, industries, subjects, regions, and categories. You can use these local codes by first specifying the "code set". To specify an analyst code set, use the alpha numeric set code. For example, to use local contributor analyst codes from the fictitious Acme Inc. (AI#001), use <code><analystSet>AI#001</analystSet><analysts>ABC</analysts></code> .
industrySet	This value indicates the industry code.
industry	Specifies an industry.
subjectSet	This value specifies the subject code by which the search must be made.
subject	This specifies the document subject to be searched for.
bSubjects	"bSubjects" values allow applications to use AND with subject codes. That is, to OR subject codes, use. For example: <code><subject>code1</subject><bSubject>code2</bSubject></code>
regionSet	This value specifies the region code.
region	Specifies a region.
country	This determines the country code.
currencies	This determines currency codes to be used during the search.
categorySet	This specifies the category code.
category	Specifies a category.
ctSubjects	During the contribution process Thomson Reuters automatically categorizes documents based on CtSubjects Criteria. You can use the Reference Information service to generate a list of the discipline categories.
disciplines	During the contribution process Thomson Reuters automatically categorizes documents based on types of analysis (disciplines). You can use the Reference Information service to generate a list of the discipline categories.
reasons	During the contribution process Thomson Reuters automatically categorizes documents based on the research purpose (reasons). You can use the Reference Information service to generate a list of the research purposes.
rptStyles	Search for industry reports. During the contribution process Thomson Reuters automatically categorizes documents based on Report Style. You can use the Reference Information service to generate a list of the industry reports.
dateRange	The date range of the document headlines to be returned. For a "newSubmissions" search, the TRKD API selects documents based on the date that the documents arrived at Thomson Reuters ("arriveDate"). For other searches, the TRKD API uses the release date contributed by the client ("releaseDate").
exclude3rdParty	True/False.
maxRows	The maximum number of document headlines to returned.
ppv	Thomson Reuters categorizes documents based on "pay per view" type. The available types are free, ppv, premium, free_ppv, free_premium, ppv_premium, all.
tkrEncoding	The <code><ticker></code> element is used in combination with the "tkrEncoding" attribute. The following algorithm is used in the TRKD API: If <code>tkrEncoding = "tkr"</code> then " <code><ticker></code> " is symbol ("IBM=US" for example); If <code>tkrEncoding = "prtID"</code> then " <code><ticker></code> " is parent ID (or issuer ID (MXID) in other words, "100085757" for example).
tkrPrimary	True/False. Documents have numerous tickers associated with them. One of the tickers may be designated the primary ticker. When this attribute is set to "1", the TRKD API will only match against the primary ticker. Otherwise, it will match against any ticker associated with the document.
useCtbSetCodes	Use the "useCtbSetCodes" attribute to specify the contributor set codes to use for all criteria.
exludeRixmlDocs	True/False.
acceptLanguage	True/False. This element allows you to retrieve the document in the language you specify.
calcPrice	True/False. This indicates whether the response must show document price or not.
synCharsRequired	This value indicates the synopsis length (in characters) you want to receive in the response.



req_id	This value shows ID of the request.
bShowPrims	True/False. This attribute allows users to specify whether all primary symbols should be returned in the response.
timeFrom	This element <timeFrom>hh:mm:ss</timeFrom> allow a user to search by time interval in case of custom date range.
timeTo	This element <timeTo>hh:mm:ss</timeTo> allow a user to search by time interval in case of custom date range.
NumPagesFrom	This attribute allow a user to search by number of pages in the document.
NumPagesTo	This attribute allow a user to search by number of pages in the document.
FileSizeFrom	This attribute allow a user to search by file size of the document.
FileSizeTo	This attribute allow a user to search by file size of the document.

13.6 Searching for Documents from Particular Contributors

The following categories are available in TRKD API to use when searching for contributors: **"brokers"**, **"independents"** and **"allCtbs"** and you may use either **"include"** or **"exclude"** action with them. The Document Search service puts restrictions on **"ctbsm"** elements allowing only one element for any category.

Each element puts some restriction on the contributors. The final result set is an intersection of all result sets for each element available for the current user entitlements. When the element has an exact category it means that there is a restriction on the contributors within the same category only, so the result includes all other contributors. The element string values can contain comma-separated contributor IDs or be empty. The empty value means all contributors within the same category will be included/excluded according to the action attribute. When the contributor's category is specified (brokers or independents), then it is checked (whether it is a broker or independent) and if it doesn't match the specified criteria the application returns an error.

You can limit your document search to research from a particular contributor or several contributors. You can also exclude one or more contributors from your search. You will need the numeric contributor ID to include or exclude contributors. See chapter Reference Information for more information about generating data about the contributors you are entitled to.

Use necessary contributors category and "include" or "exclude" actions to include or exclude contributors. For example, the following query excludes "Multex Research Desk" (contributor 20780):

XML Sample Request - Excluding Contributors

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/DocSearch/DocSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1/DocSearch_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <DocSearch_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1" dateRange="newSubmissions" maxRows="20">
      <ctbsm category="allCtbs" action="exclude">20780</ctbsm>
    </DocSearch_Request_1>
  </Body>
</Envelope>
```

To include only documents from a particular contributor, use the <action="include"> element in the query. The following query shows how to search for documents from a single contributor:

XML Sample Request - Searching for Documents from a Single Contributor




```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/DocSearch/DocSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1/
    DocSearch_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <DocSearch_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1" dateRange="newSubmissions"
    maxRows="20">
      <ctbsm category="allCtbs" action="include">20780</ctbsm>
    </DocSearch_Request_1>
  </Body>
</Envelope>

```

To designate multiple contributors, use a comma separated list inside <ctbsm/>. For example, the following query excludes both "Multex Research Desk" (contributor 20780) and "Multex Estimates" (contributor 17459):

XML Sample Request - Excluding Multiple Contributors

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/DocSearch/DocSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1/
    DocSearch_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <DocSearch_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1" dateRange="newSubmissions"
    maxRows="20">
      <ctbsm category="allCtbs" action="exclude">20780,17459</ctbsm>
    </DocSearch_Request_1>
  </Body>
</Envelope>

```

Most manipulations can be done in different ways. For example, each of the following three elements

```

<ctbsm category="brokers" action="include"/>
<ctbsm category="independents" action="include" />
<ctbsm category="allCtbs" action="include" />

```

means the same and there is no restriction on contributors at all.

The element <ctbsm category="brokers" action="exclude">2345</ctbsm> means "all brokers except selected and all independents", but it is different from <ctbsm category="allCtbs" action="exclude">2345</ctbsm>. The application checks whether the contributor with the specified id is a broker and returns an error, if not - the result set will be the same. The element <ctbsm category="brokers" action="include">2345</ctbsm> means that just one broker and all independent will be selected.

Note: The overall result depends on current user entitlements, so no document would be included in the response result if the document group does not include current user entitlements.

Note: Another way to put restriction on contributor search is by using elements <ctbs>, <exclude3rdParty> and <excludeCtbs> in the Document Search service. However, Thomson Reuters **DOES NOT** recommend using them when searching for documents. You may not combine these elements with the elements described above, doing so will result in a response containing an error:



Incorrect Request

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/DocSearch/DocSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1/DocInfo_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <FtsDocIDs_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1" dateRange="allDates"
      exclude3rdParty="true" maxRows="3">
      <excludeCtbs>true</excludeCtbs>
      <ctbs>10642</ctbs>
      <ctbsm category="brokers" action="exclude">10642</ctbsm>
      <ctbsm category="independents" action="exclude" />
      <matchStr>food</matchStr>
    </FtsDocIDs_Request_1>
  </Body>
</Envelope>

```

XML Response

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1/FtsDocIDs_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <FtsDocIDs_Response_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1">
      <Fault>
        <faultcode>soap:Server</faultcode>
        <faultstring>Search failed</faultstring>
        <detail>
          <DefaultTornadoFault_1 xmlns="http://schemas.reuters.com/ns/2005/08/infrastructure/faults">
            <Description>searches_1_doer::search failed: invalid contributors manipulation</Description>
            ...
          </DefaultTornadoFault_1>
        </detail>
      </Fault>
    </FtsDocIDs_Response_1>
  </Body>
</Envelope>

```

13.7 Searching for Documents about a Particular Company

You can limit your document search to research about a particular company by specifying that company in the request. You can specify the company by specific ticker, Thomson Reuters identifier, or by using the Search symbology service to resolve tickers to Thomson Reuters identifiers.

13.7.1 A Word about Tickers

When documents are delivered to Thomson Reuters by contributors they are associated with a set of tickers. That is, contributors tag documents with relevant tickers. A ticker is represented by a text field and can contain keywords that are only relevant to the contributor - there is no common standard enforced by Thomson Reuters about what contributors should place in the ticker field. The best way to accurately search for a document is to use the Search service.

The <ticker> element is used in combination with the "tkrEncoding" attribute. The following algorithm is used in the TRKD API:



- If tkrEncoding = "tkr" then "<ticker>" is symbol ("IBM=US" for example);
- If tkrEncoding = "prtID" then "<ticker>" is parent ID (or issuer ID (MXID) in other words, "100085757" for example).

All documents are associated with a set of Thomson Reuters identifiers, referred to as MXIDs. Unlike tickers, which can be ambiguous, each MXID uniquely identifies a company. You can use the Search service to obtain the MXID by providing a variety of information such as company names, symbols, SEDOLs, CUSIPs, for example.

13.7.2 Searching by Tickers

Note: It is recommended to use **MXID** when searching for documents. When you perform document search by a ticker (for example, IBM), Thomson Reuters Search looks for exact match. So, if a contributor tagged the document with "IBM.N" ticker, your search will return no results. See chapter Reuters Search to know how to resolve company symbols/tickers to MXID.

The following code example shows a simple query to search by a set of tickers, in this case AMZN and IBM. This query obtains a list of document headlines whose arrival date is classified as a new submission, and whose primary ticker is either AMZN or IBM. This list is sorted by date in descending order and has no more than ten entries.

XML Sample Request - Searching by Tickers

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/DocSearch/DocSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1/DocSearch_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <DocSearch_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1" dateRange="newSubmissions"
      maxRows="10" tkrPrimary="1">
      <sort s_c="date" s_d="desc"/>
      <ticker>AMZN</ticker>
      <ticker>IBM</ticker>
    </DocSearch_Request_1>
  </Body>
</Envelope>
```

Attribute	Description
dateRange	The date range of the document headlines to be returned. For a "newSubmissions" search, the TRKD API selects documents based on the date that the documents arrived at Thomson Reuters ("arriveDate"). For other searches, the TRKD API uses the release date contributed by the client ("releaseDate").
maxRows	The maximum number of document headlines to returned - in this example a request is for a maximum of 10. Note: Max value for maxRows is 10000.
tkrPrimary	Documents have numerous tickers associated with them. One of the tickers may be designated the primary ticker. When this attribute is set to "1", the TRKD API will only match against the primary ticker. Otherwise, it will match against any ticker associated with the document.
sort	The sort element allows you to control how the document headlines are sorted. The <s_c> attribute allows you to sort by date, score, pages, and the primary ticker. The <s_d> attribute allows you to control whether the document headlines are sorted in ascending or descending order.
ticker	The list of tickers to search on. For additional information about tickers, see section A Word About Tickers.

13.8 Complex Keyword Searches

The following table represents available keyword functionality.

Typing in the text...	Will retrieve documents containing...
DEC	...DEC, dec, Dec, etc.



DEC & IBM or DEC and IBM	...both DEC and IBM.
DEC IBM or DEC or IBM	...either DEC or IBM.
DEC IBM	...either DEC or IBM.
DEC & IBM GE	...either both DEC and IBM, or GE.
DEC & (IBM GE)	...both DEC and either IBM or GE.
"annual report"	...the phrase "annual report".
annual report	...either "annual" or "report".
software & "annual reports"	...both the word software and the phrase annual reports.
software & ^ spreadsheet	...software but not spreadsheet.
Java & ^ (coffee Indonesia)	...java but not coffee or Indonesia.
Coca-Cola near/5 PepsiCo	...Coca-Cola no more than 5 characters away from PepsiCo.
Coca-Cola near PepsiCo. (Note: without a number of characters it will default to 64 characters).	...Coca-Cola near PepsiCo.
mer*	...mer, Merrill, merry, etc. The "*" stands for any number of letters at the end of the word.
m?cro	...micro, macro, m3cro, etc. The "?" stands for any one letter or digit.
Jane's	...Jane's. The apostrophe is not treated like a single quote.
"news of the day"	...the phrases "news of the day", "news of day", "news day". Words like "of", "the", "and", "in" are excluded from the search.
"news & day"	...the phrases "news & day", "news @ day", "news day". Special characters (not letters or numbers) are regarded as interchangeable.

Note: If the <maxRowsToAbort> attribute is set bigger than 2000, then system will reset it to 2000 (max value handled by system).

If the number of records to be returned is greater than <maxRowsToAbort>, system will respond with 'DocSearch_TooGeneric' RKD fault.

For example, if you have specified the following criteria

XML Sample

```
<maxRowsToAbort="500" and maxRows="50"
```

keep in mind that the <maxRows> attribute is only for paging, which means that if 400 records satisfy the specified criteria then system will send back only 50 records. But if 600 records satisfy the specified criteria, you will receive a "too much data" exception.

13.9 Searching by Analyst, Industry, Language, and other Criteria

The <DocSearch_Request_1> elements allow you search to by analyst, industry, language, and many other criteria. For example, to limit the query to documents relevant to the Advertising industry (Reuters industry code 100):

XML Sample Request - Searching by Industry

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/DocSearch/DocSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1/DocSearch_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
```



```

    <ApplicationID>[AppID]</ApplicationID>
    <Token>[Impersonation Token]</Token>
  </Authorization>
</Header>
<Body>
  <DocSearch_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1">
    <industrySet>100</industrySet>
  </DocSearch_Request_1>
</Body>
</Envelope>

```

The example below has more search criteria specified:

XML Sample Request - Searching by Analyst, Industry, Language, and other Criteria

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/2008/01/12/DocSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1/DocSearch_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <DocSearch_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1">
      <ctbsm category="brokers" action="include">651651</ctbsm>
      <ticker>41651</ticker>
      <analystSet>gregg</analystSet>
      <industrySet>100</industrySet>
      <subjectSet>reuters</subjectSet>
      <subject>merger</subject>
      <bSubjects>appearance</bSubjects>
      <regionSet>europe</regionSet>
      <country>UK</country>
      <currencies>USD</currencies>
      <categorySet>651</categorySet>
    </DocSearch_Request_1>
  </Body>
</Envelope>

```

Attribute	Description
ctbsm category	This value determines the category of contributors. The possible values are: • brokers • independents • allCtbs The possible actions are: • include • exclude
ticker	This shows company's ticker.
industrySet	This value indicates the industry code.
subjectSet	This value specifies the subject code by which the search must be made.
subject	This specifies the document subject to be searched for.
bSubjects	"Subjects" values allow applications to use AND with subject codes.
regionSet	This value specifies the region code.
country	This determines the country code.
currencies	This determines currency codes to be used during the search.
categorySet	This specifies the category code.

Note: The parameter `acceptLanguage="language_ID"` does not make the service search for documents in the specified language, but returns response with the elements' values in English (if there are any). To search for the document in a specific



language use the <langID> parameter.

XML Sample Request - Searching for Documents in English

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/2008/01/12/DocSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1/DocSearch_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <DocSearch_Request_1 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
      dateRange="customDate" maxRows="30" xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1">
      <dateFrom>2009-09-22</dateFrom>
      <dateTo>2009-09-23</dateTo>
      <langID>en</langID>
    </DocSearch_Request_1>
  </Body>
</Envelope>
```

13.9.1 Generating the Search Code

Use <GetReferenceInfoRequest/> to generate the codes for analysts, industries, etc. For more information, see chapter Reference Information. For analysts, industries, subjects, regions, and categories, you can construct your queries using either Thomson Reuters (global) codes or contributor (local) codes.

13.9.2 Using Reuters (Global) Codes

By default, the TRKD API document search expects Thomson Reuters (global) codes in the request.

For example: <analysts>32F8</analysts> limits the query to a (fictitious) analysts whose global code is 32F8.

13.9.3 Using Contributor (Local) Codes

Many contributors have their own designations for analysts, industries, subjects, regions, and categories. You can use these local codes by first specifying the "code set".

- to specify an analyst code set, use the alpha numeric set code. For example, to use local contributor analyst codes from the fictitious Acme Inc. (AI#001), use <analystSet>AI#001</analystSet> <analysts>ABC</analysts>.
- to specify an industry, subject, region, or category code set, use the numeric contributor ID. For example, to use the local industry codes from the fictitious Acme Inc. (1), use <industrySet>1</industrySet> <industries>XYZ</industries>

Note: Use a <GetContributorInfoRequest> to determine the contributor code set designation. For information about <GetContributorInfoRequest>, see chapter Reference Information.

Note: As an alternate syntax, use the "useCtbSetCodes" attribute to specify the contributor set codes to use for all criteria.

13.10 Searching by Additional Contributor Specific Data

In some cases, contributors need to tag contributed documents with data that does not fit in the standard set (ticker, industry, analyst, and others); for example, there may be documents referring to a particular event. Thomson Reuters includes this contributor specific data as "auxiliary data". To search for documents tagged with particular auxiliary data, use the <auxData/>

element. For example, to search for "Multex Research Desk" (contributor 20780) documents tagged with auxiliary code 555:

XML Sample Request - Searching by Additional Contributor Specific Data

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/DocSearch/DocSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1/DocSearch_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <DocSearch_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1" dateRange="newSubmissions"
      maxRows="2">
      <ctbs>20780</ctbs>
      <auxData>555</auxData>
    </DocSearch_Request_1>
  </Body>
</Envelope>
```

13.11 Including the Undiscounted Document Price in the Metadata

The cost for a user to purchase a document is based on the user's entitlements. By default, the document result set (<diDef/> element) includes a "price" attribute indicating whether or not the document has a price. price="1" indicates that the user must purchase a document, while price="0" indicates the document is free.

To return the actual undiscounted price of the document, rather than this boolean indicator, specify calcPrice="1" in the request.

Note: Including the document price in the result set is an expensive and therefore relatively slow operation. You should only request the document price for individual documents, not a range. Use the boolean "price" indicator to designate "pay per view" documents for your user. Only calculate the price if the user selects a particular document.

Note: The document price returned by this request does not reflect discounts generally given through resellers. This price also does not reflect the standard "24 hour discount" implemented by "On Demand" sites. With the "24 hour discount" clients can retrieve a document multiple times in 24 hours and Thomson Reuters only charges for the first download.

The following query returns the document metadata, including the undiscounted price, for document "27384598":

XML Sample Request - Including the Undiscounted Document Price in the Metadata

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/DocSearch/DocSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1/DocSearch_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <DocSearch_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1" dateRange="allDates"
      maxRows="1" calcPrice="1">
      <docID>27384598</docID>
    </DocSearch_Request_1>
  </Body>
```



```
</Envelope>
```

13.11.1 Interpreting the Document Price

The document price returned in the response metadata is in cents. You must code your application to display a meaningful amount to your users. For example, if the response indicates 4950, your application should display \$49.50.

Note: The document price returned by this request does not reflect discounts generally given through resellers. This price also does not reflect the standard "24 hour discount" implemented by "On-Demand" sites. With the "24 hour discount" clients can retrieve a document multiple times in 24 hours and Thomson Reuters only charges for the first download.

13.12 Including the Document Synopsis in the Result Set

By default, the document response metadata includes the "hasSyn" attribute to indicate whether or not a document includes a synopsis - hasSyn="1" indicates a document with a synopsis.

To include the synopsis in the document response metadata, use synCharsRequired to indicate the synopsis length (in characters) you want to receive in the response. For example, the following query requests 50 characters from the synopsis:

XML Sample Request - Including the Document Synopsis in the Result Set

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/DocSearch/DocSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1/DocSearch_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <DocSearch_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1" dateRange="newSubmissions"
      maxRows="10" synCharsRequired="50">
    </DocSearch_Request_1>
  </Body>
</Envelope>
```

13.13 Query Optimization

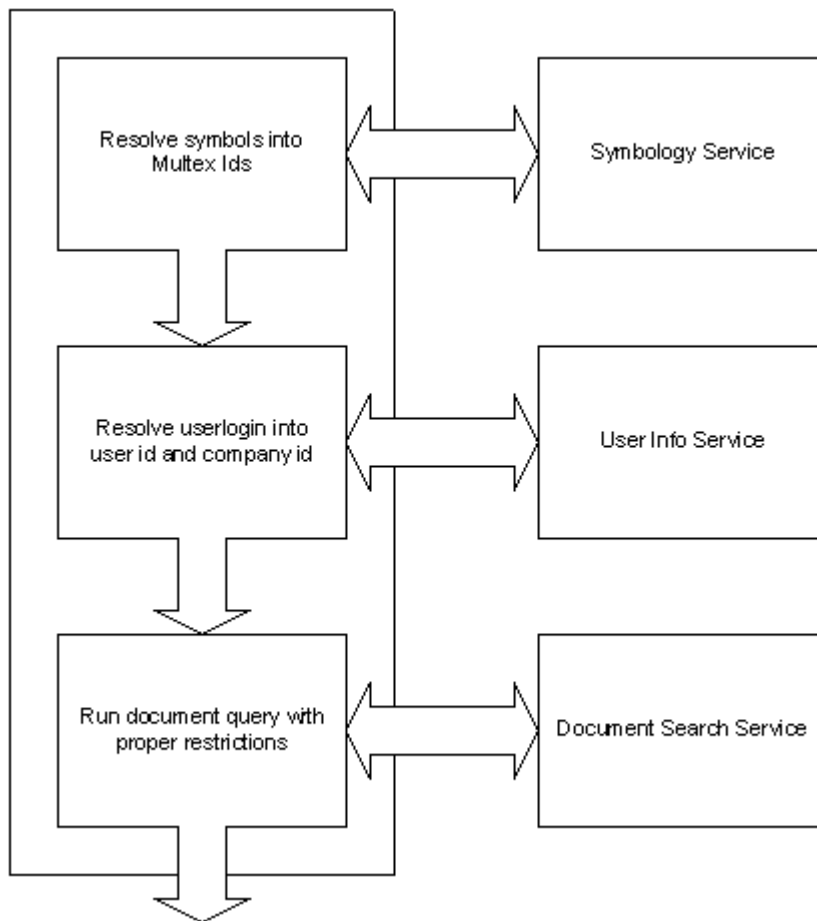
This section describes the various ways that the document search query can be optimized. To understand all the aspects of optimization, it is important to understand the steps that are performed in executing a query as described in section The Query Pipeline. Using this information, we show additional ways of optimizing a query by caching information.

13.13.1 The Query Pipeline

To simplify development, the TRKD API performs a number of functions simultaneously. As shown in figure below, up to three sets of backend calls can be made on behalf of a single document search request. The resolution of the symbols and user logins can be cached resulting in a significant speedup of the document search request.

Other than the last layer, the document query layer, symbol resolution is probably the most expensive. If the MXIDs of the companies can be cached, this would result in the most significant speedup of the document search request. For more information on caching, see section Caching the MXID.





13.13.2 Caching the MXID

Caching the Reuters ID, MXID, provides you the most efficient document search. This is because resolving symbols down to MXIDs can be a time consuming process.

Use the Reuters Search service to find MXIDs for particular companies.

The following example shows a simple query to search by a set of documents using MXIDs.

XML Sample Request - Caching the MXID

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/DocSearch/DocSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1/DocSearch_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <DocSearch_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1" dateRange="newSubmissions"
      maxRows="10" tkrEncoding="prtID">
      <ticker>100065019</ticker>
      <ticker>100081948</ticker>
      <ticker>100085757</ticker>
      <sort s_c="date" s_d="desc"/>
    </DocSearch_Request_1>
  </Body>
</Envelope>
  
```



```
<excludeCtbs>1</excludeCtbs>
<ctbs>17459</ctbs>
</DocSearch_Request_1>
```

```
</Body>
</Envelope>
```

Attribute	Description
<ticker>	The parent (issuer) ID for the query.
prtID	The ticker encoding informing the request that the codes are MXIDs.

13.14 Paging the Response

There is a built-in paging feature you can use to break up the amount of records you get back into multiple groups. By doing so instead of loading a huge amount of data in a single pass you can choose how many records each page should hold and control the amount of records and time it takes to return the information.

You can specify paging information by using the following elements:

maxRows: Indicates how many records should be returned in a response. If there are more records then specified in maxRow the next page can be retrieved by specifying pagingHint and retrieving the next batch. **Note:** Max value for maxRows is 10000.

pagingHint: By specifying the hintStr and docID of the last record on the previous page you are able to retrieve the next page.

hintStr should contain values defined by the following rules:

- **If you sort by date and the query is newSubmissions**, then hintStr= arriveDate of the last doc in the previous query, formatted time_t (# of seconds since 01/01/1970).
- **For any other query sorted by date**, hintStr = releaseDate of the last doc in the previous query, formatted time_t (# of seconds since 01/01/1970).
- **If you sort by primaryTicker**, then hintStr = pTck of the last doc in the previous query.
- **If you sort by pages**, then hintStr = pages of the last doc in the previous query.

13.14.1 Making a Request with Paging

After setting maxRows to the desired amount (in this case 5) and retrieving the first batch of results you can do the following to retrieve the next page:

XML Sample Request - Making a Request with Paging
<pre><Envelope xmlns="http://www.w3.org/2003/05/soap-envelope"> <Header> <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/DocSearch/DocSearch.svc</To> <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID> <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1/DocSearch_1</Action> <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1"> <ApplicationID>[AppID]</ApplicationID> <Token>[Impersonation Token]</Token> </Authorization> </Header> <Body> <DocSearch_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1" exclude3rdParty="0" acceptLanguage="en" ppv="both" calcPrice="0" tkrEncoding="tkr" maxRowsToAbort="2000" maxRows="5" infoLevel="default" dateRange="newSubmissions" queryType="normal"> <sort s_d="desc" s_c="date" /> <pagingHint hintStr="1179218642" docID="39597491" /> </DocSearch_Request_1> </Body> </Envelope></pre>



13.14.2 Calculating Number of Seconds

Below is a simple VBScript that calculates desired date to number of seconds since 01/01/1970.

Just copy the information below into a text file, and save it with .VBS extension.

```
Date2 = DateSerial(2008, 4, 25) '(year, month, day)
```

In the first brackets you need to specify the date, for which you want to calculate number of seconds since 1970. The second brackets define the date format.

13.15 Searching for Industry Reports

To search for industry reports use the <rptStyles> element:

XML Sample Request - Searching for Industry Reports

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/DocSearch/DocSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1/DocSearch_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <DocSearch_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1" exclude3rdParty="0"
      acceptLanguage="en" ppv="both" calcPrice="0" tkrEncoding="tkr" maxRowsToAbort="2000"
      maxRows="100" infoLevel="default" dateRange="newSubmissions" queryType="normal">
      <sort s_d="desc" s_c="date" />
      <rptStyles>150000009</rptStyles>
    </DocSearch_Request_1>
  </Body>
</Envelope>
```

13.16 Some Words about Document Search Criteria

Document Search criteria of the same type are logical ORs while Document Search criteria of different types are ANDs. For example, a Document Search with

XML Sample

```
<ctbs>1</ctbs>
<ctbs>2</ctbs>
```

says "return docs with either ctbs=1 OR ctbs=2".

But a Document Search with

XML Sample

```
<ctbs>1</ctbs>
<lang>en</lang>
```

says "return docs with ctbs=1 AND lang=en".

Note: The Document Search service may return a non-empty response without errors if you specify an invalid value for "ctbs" in the request.



We implemented <bSubject> to allow applications to use AND with subject codes. That is, to OR subject codes, use

XML Sample

```
<subject>code1</subject>
<subject>code2</subject>
```

To AND the codes use

XML Sample

```
<subject>code1</subject>
<bSubject>code2</bSubject>
```

Note: Keep in mind that symbol "\$" is converted to '*' sign that serves as a wild card character in fulcrum. Also, symbol '#' is a special symbol for fulcrum search engine and should not be used in search query.

13.17 Handling Negative Document Price Values

Sometimes responses may retrieve negative values for document prices.

The following values are possible:

Code	Description
-1	price is not found
-2	user is not entitled for the document
-3	the document is not found
-4	document is not allowed to be downloaded by pages or locked

If the response contains a negative value for a document price, the <priceDescription> attribute will provide explanation for that negative value.

The <priceDescription> attribute is used in responses for the following operations:

- DocInfo_1
- Batch_1
- DocSearch_1
- FtsDocSearch_1

For example:

XML Sample Response - DocInfo_1

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/01/12/webservices/
rkd/DocSearch_1/DocInfo_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <DocInfo_Response_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1">
      <diDef arriveDate="2011-11-03T09:31:00" companyName="Directors Deals Ltd." ctbID="21143" docClass="MR"
docID="43853826" fileExt="pdf" fileName="43853826.pdf" fileSize="99434" fileType="pdf" hasEarnings="false" hasSyn="true"
indOvw="false" localCode="B00KX66" pages="1" price="-1" releaseDate="2011-11-03T09:31:00" submitDate="2011-11-
03T09:31:00" tocEnd="-1" tocStart="-1" transpRpt="false" priceDescription="price is not found">
        <headline>Company Snapshot - Komplet Asa</headline>
        ...
      </diDef>
    </DocInfo_Response_1>
  </Body>
</Envelope>
```

XML Sample Response - Batch_1



```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/01/12/webservices/
rkd/DocSearch_1/Batch_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <Batch_Response_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1">
      ...
    </diDef>
    <diDef arriveDate="2008-04-07T16:44:05" companyName="Kevin Dann & Partners" ctbID="22251" docClass="MR"
docID="42065857" fileExt="pdf" fileName="42065857.pdf" fileSize="91913" fileType="pdf" hasEarnings="false" hasSyn="true"
indOvw="false" pages="3" price="-2" releaseDate="2008-04-07T22:13:00" relevance="321" submitDate="2008-04-
07T16:44:00" tocEnd="-1" tocStart="-1" transpRpt="false" priceDescription="user is not entitled for the document">
    <headline>CSK AUTO CORP : COMPANY DELAYS 10-K FILING - 4Q07 COMPS DOWN</headline>
    ...
  </diDef>
  <FtsDocSearch_Response_1>
</Batch_Response_1>
</Body>
</Envelope>

```

XML Sample Response - DocSearch_1

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/01/12/webservices/
rkd/DocSearch_1/DocSearch_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <resp_search_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1">
      <diDef arriveDate="2011-11-03T09:31:00" companyName="Directors Deals Ltd." ctbID="21143" docClass="MR" docID="43853826"
fileExt="pdf" fileName="43853826.pdf" fileSize="99434" fileType="pdf" hasEarnings="false" hasSyn="true" indOvw="false"
localCode="B00KX66" pages="1" price="-3" releaseDate="2011-11-03T09:31:00" submitDate="2011-11-03T09:31:00"
tocEnd="-1" tocStart="-1" transpRpt="false" priceDescription="the document is not found">
      <headline>Company Snapshot - Komplet Asa</headline>
      ...
    </diDef>
    </resp_search_1>
  </Body>
</Envelope>

```

XML Sample Response - FtsDocSearch_1

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/01/12/webservices/
rkd/DocSearch_1/FtsDocSearch_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <FtsDocSearch_Response_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/DocSearch_1">
      ...
    </diDef>
    <diDef arriveDate="2011-11-14T14:50:27" companyName="Directors Deals Ltd." ctbID="21143" docClass="MR" docID="57799514"
enhancedPDF="false" fileExt="pdf" fileName="57799514.pdf" fileSize="87094" fileType="pdf" hasEarnings="false" hasFPP="true"
hasSyn="true" indOvw="false" localCode="B59HWK0" pages="1" price="-4" pricingType="1" releaseDate="2011-11-
14T14:50:00" submitDate="2011-11-14T14:50:00" tocEnd="-1" tocStart="-1" transpRpt="false" priceDescription="document
is not allowed to be downloaded by pages or locked">
    <headline>Company Snapshot - Jiangsu Huifeng Agrochemical Co</headline>
    ...
  </diDef>
  <FtsDocSearch_Response_1>
</Body>
</Envelope>

```





chapter 14 Entitlements Administration

The Entitlement Administration 2 service allows the user to manage entitlement information by retrieving and updating entitlement, user or user group and document group information from the database.

The following operations are available:

- **Create Entitlement (CreateEntitlement_1)** - creates an entitlement/entitlements.
- **Get Entitlement (GetEntitlement_1)** - retrieves a set of entitlements according to the given user or user group or viewer company and document group contributor company data.
- **Get User Group Template (GetUserGroupTemplate_1)** - retrieves all existing user group templates with IDs and names.
- **Remove Entitlement (RemoveEntitlement_1)** - removes an entitlement or a set of entitlements.
- **User Group From Template (UserGroupFromTemplate_1)** - creates a new user group using existing template.
- **Remove ROS Entitlement (RemoveROSEntitlements_1)** - resets the entitlements and removes the user from the ROS user group.
- **Set User Group Membership (SetUserGroupMembership_1)** - adds a user to the specified user group.
- **Get User Group Membership (GetUserGroupMembership_1)** - lists all users in the user group.
- **Remove User Group Membership (RemoveUserGroupMembership_1)** - removes all entitlements associated with the specified user group.
- **Get User Group (GetUserGroup_1)** - retrieves the company's user groups.

14.1 Authentication/Authorization, Service Endpoint, and Required Headers

Authorization

All requests to the Entitlement Administration web service require an authorization token. For details, see section Understanding Authentication Tokens.

Authentication

Thomson Reuters Entitlement Administration uses Reuters impersonation tokens for each effective user. In this case, Thomson Reuters must create each user before your application authenticates them. Unmanaged effective users are not supported in Entitlement Administration.

For additional information, see section Creating a Token.

Service Endpoint

Entitlement Administration 2 Endpoint

<http://api.rkd.reuters.com/api/EntitleAdmin/EntitleAdmin.svc>

Required Header

Required HTTP Headers

POST /api/EntitleAdmin/EntitleAdmin.svc HTTP/1.1
Content-Type: application/soap+xml
Host: api.rkd.reuters.com
Content-Length: [length]



14.2 WSDL

WSDL:

http://api.rkd.reuters.com/schemas/EntitleAdmin/wsd/EntitleAdmin_2_HttpAndRKDTToken.wsdl

14.3 Create Entitlement (CreateEntitlement_1)

The CreateEntitlement_1 request is used to create an entitlement/entitlements.

The following example creates a set of entitlements for document groups for user identity and user group identity.

XML Sample Request - Creating Entitlement

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/EntitleAdmin/EntitleAdmin.svc/Anonymous</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2/
    CreateEntitlement_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <CreateEntitlement_Request_1 xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2" xmlns:Company="http://
    www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2_Company">
      <entitlement>
        <entitlementIdentity>
          <userIdentity>
            <Company:alias>tr_admin@reuters.com</Company:alias>
          </userIdentity>
          <docGroup>
            <companyId>27</companyId>
            <id>4</id>
          </docGroup>
        </entitlementIdentity>
        <description>user entitlement one</description>
      </entitlement>
      <entitlement>
        <entitlementIdentity>
          <userGroupIdentity>
            <Company:companyID>40171</Company:companyID>
            <Company:ID>133</Company:ID>
          </userGroupIdentity>
          <docGroup>
            <companyId>17964</companyId>
            <id>2</id>
          </docGroup>
        </entitlementIdentity>
        <description>user group entitlement one</description>
      </entitlement>
      <entitlement>
        <entitlementIdentity>
          <userIdentity>
            <Company:cid_uid>
              <Company:companyID>40171</Company:companyID>
              <Company:ID>32556999</Company:ID>
            </Company:cid_uid>
          </userIdentity>
          <docGroup>
            <companyId>17964</companyId>
            <id>3</id>
          </docGroup>
        </entitlementIdentity>
        <description>user entitlement two</description>
      </entitlement>
    </CreateEntitlement_Request_1>
  </Body>
</Envelope>
```




```

</CreateEntitlement_Request_1>
</Body>
</Envelope>

```

Element	Value
User Identity	• Alias • Company ID + User ID
User Group Identity	• User Group ID • Company ID
Doc Group Identity	• Doc Group ID • Company ID
Description	The entitlement description.

The response returns an empty line if the creation of entitlement is successful:

XML Sample Response - Creating Entitlement

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2/CreateEntitlement_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <CreateEntitlement_Response_1 xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2"/>
  </Body>
</Envelope>

```

14.4 Get Entitlement (GetEntitlement_1)

The GetEntitlement_1 request retrieves a set of entitlements according to the given user or user group or viewer company and document group or contributor company data.

The following example retrieves the set of entitlements for Viewer Company ID 47319 and 40171 with the specified Document Groups of companies with IDs 27 and 17964 with all output filter criteria set to true.

XML Sample Request - Retrieving Entitlement

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/EntitleAdmin/EntitleAdmin.svc/Anonymous</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2/GetEntitlement_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetEntitlement_Request_1 xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2">
      <inputFilter>
        <vwrCompanyId>47319</vwrCompanyId>
        <vwrCompanyId>40171</vwrCompanyId>
        <docGroupIdentity>
          <companyId>27</companyId>
          <id>4</id>
        </docGroupIdentity>
        <docGroupIdentity>
          <companyId>17964</companyId>

```



```

        <id>2</id>
      </docGroupIdentity>
    <docGroupIdentity>
      <companyId>17964</companyId>
      <id>3</id>
    </docGroupIdentity>
  </inputFilter>
  <outputFilter ctbCompanyName="true" docGroupName="true" vwrCompanyName="true"/>
</GetEntitlement_Request_1>

</Body>
</Envelope>

```

Element	Description
inputFilter	User-Vwr Identity - User-viewer identity (mandatory). Can have the following values: • User Identity: • Alias • Company ID + User ID • Integrated Entitlement (optional) • User Group Identity: • User Group ID • Company ID • Vwr Company ID: • Viewer Company ID
	Doc-Ctb Identity - Doc-Contributor identity (mandatory). Can have the following values: • Doc Group Identity: • Doc Group ID • Company ID • Ctb Company ID: • Contributor Company ID
outputFilter	Allows you to add the following information to the response: • VwrCompanyName - Viewer company name • CtbCompanyName - Contributor company name • DocGroupname - Document group name

The response retrieves the following information:

XML Sample Response - Retrieving Entitlement

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2/GetEntitlement_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <GetEntitlement_Response_1 xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2">
      <entitlement>
        <entitlementIdentity>
          <userGroupIdentity>
            <companyId xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2_Company">47319</companyId>
            <id xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2_Company">10</id>
          </userGroupIdentity>
          <docGroup>
            <companyId>27</companyId>
            <id>4</id>
          </docGroup>
        </entitlementIdentity>
        <vwrCompanyName>Test sellside BEE</vwrCompanyName>
        <ctbCompanyName>Banc of America Securities</ctbCompanyName>
        <docGroupName>TEST</docGroupName>
      </entitlement>
      <entitlement>
        <entitlementIdentity>
          <userIdentity>
            <cid_uid xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2_Company">

```



```

        <companyID>40171</companyID>
        <ID>32556999</ID>
        </cid_uid>
        <alias xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2_Company">tr_admin@reuters.com</alias>
        </userIdentity>
        <docGroup>
            <companyID>27</companyID>
            <id>4</id>
        </docGroup>
        </entitlementIdentity>
        <vwrCompanyName>TMC - Test API Company 1 (IM - US)</vwrCompanyName>
        <ctbCompanyName>Banc of America Securities</ctbCompanyName>
        <docGroupName>TEST</docGroupName>
        </entitlement>
    </GetEntitlement_Response_1>
</Body>
</Envelope>

```

Attribute	Description
entitlementIdentity	Consists of two parts – viewer (user identity or user group identity) and document group identity.
vwrCompanyName	Name of the viewer company.
ctbCompanyName	Name of the contributor company.
docGroupName	Name of the document group.

14.5 Get User Group Template (GetUserGroupTemplate_1)

You can use the GetUserGroupTemplate_1 request to retrieve all existing user group templates with IDs and names.

The following request is an example of GetUserGroupTemplate_1, which retrieves user group templates.

XML Sample Request - Retrieving User Group Template

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/EntitleAdmin/EntitleAdmin.svc/Anonymous</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2/GetUserGroupTemplate_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetUserGroupTemplate_Request_1 xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2"/>
  </Body>
</Envelope>

```

The response returns the list of existing user group templates with their IDs and names:

XML Sample Response - Retrieving User Group Template

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2/GetUserGroupTemplate_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>

```



```

<GetUserGroupTemplate_Response_1 xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2">
  <userGroupTemplate>
    <id>5</id>
    <name>Corporates/TMC ROS (Canada)</name>
  </userGroupTemplate>
  <userGroupTemplate>
    <id>6</id>
    <name>Corporates/TMC ROS (Japan)</name>
  </userGroupTemplate>
  <userGroupTemplate>
    <id>7</id>
    <name>Corporates/TMC ROS (ROW)</name>
  ...

  <userGroupTemplate>
    <id>10</id>
    <name>ULE (Japan)</name>
  </userGroupTemplate>
  <userGroupTemplate>
    <id>11</id>
    <name>ULE (ROW)</name>
  </userGroupTemplate>
  <userGroupTemplate>
    <id>12</id>
    <name>ULE (US)</name>
  </userGroupTemplate>
</GetUserGroupTemplate_Response_1>

</Body>
</Envelope>

```

14.6 Remove Entitlement (RemoveEntitlement_1)

The RemoveEntitlement_1 request removes an entitlement.

The following example removes the entitlement for the specified document group for user identity and user group identity.

XML Sample Request - Removing Entitlement

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/EntitleAdmin/EntitleAdmin.svc/Anonymous</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2/RemoveEntitlement_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <RemoveEntitlement_Request_1 xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2">
      <entitlementIdentity>
        <userGroupIdentity>
          <Company:companyID>40171</Company:companyID>
          <Company:ID>133</Company:ID>
        </userGroupIdentity>
        <docGroup>
          <companyId>17964</companyId>
          <id>1</id>
        </docGroup>
      </entitlementIdentity>
    </RemoveEntitlement_Request_1>
  </Body>
</Envelope>

```

An entitlement can be removed by the following identities:



Identity	Description
Company	Specifies company ID.
entitlementIdentity	Specifies entitlement data. Can have the following values: • User Identity • User Group Identity • Doc Group Identity For more information see section Create Entitlement (CreateEntitlement_1).
User Group	Specifies the following: • User Group ID • Company ID
User	Specifies user identity. Can have the following values: • Alias • Company ID + User ID

The response returns an empty line if entitlements have been removed successfully:

XML Sample Response - Removing Entitlement

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2/RemoveEntitlement_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <RemoveEntitlement_Response_1 xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2"/>
  </Body>
</Envelope>
```

Note: When you try to remove a non-existent entitlement or non-existent set of entitlements, you will not receive any error.

14.7 User Group From Template (UserGroupFromTemplate_1)

The UserGroupFromTemplate_1 can be used to create a new user group using existing template.

The following example creates a new user group with the specified description for the company with companyId '47319'. New user group will be created using the template with templateId '4'.

XML Sample Request - Retrieving User Group Template

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/EntitleAdmin/EntitleAdmin.svc/Anonymous</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2/UserGroupFromTemplate_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <UserGroupFromTemplate_Request_1 xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2">
      <input>
        <description>usergroup_description</description>
        <companyId>47319</companyId>
        <templateid>4</templateid>
      </input>
    </UserGroupFromTemplate_Request_1>
  </Body>
</Envelope>
```



The response returns the ID of the created user group:

XML Sample Response - Retrieving User Group Template

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/08/08/webservices/rkd/
      EntitleAdmin_2/UserGroupFromTemplate_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <UserGroupFromTemplate_Response_1 xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2">
      <userGroupIdentity>
        <companyID xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2_Company">47319</companyID>
        <ID xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2_Company">8</ID>
      </userGroupIdentity>
    </UserGroupFromTemplate_Response_1>
  </Body>
</Envelope>
```

14.8 Remove ROS Entitlement (RemoveROSEntitlements_1)

You can use the RemoveROSEntitlements_1 request to reset the entitlements and remove the user from the ROS user group.

XML Sample Request - Removing ROS Entitlement

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/EntitleAdmin/EntitleAdmin.svc/Anonymous</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2/
      RemoveROSEntitlements_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <RemoveROSEntitlements_Request_1 xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2">
      <userGroupIdentity>
        <companyID xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2_Company">47319</companyID>
        <ID xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2_Company">6</ID>
      </userGroupIdentity>
    </RemoveROSEntitlements_Request_1>
  </Body>
</Envelope>
```

The response is empty if request was successful:

XML Sample Response - Removing ROS Entitlement

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/08/08/webservices/rkd/
      EntitleAdmin_2/RemoveROSEntitlements_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <RemoveROSEntitlements_Response_1 xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2">
    </RemoveROSEntitlements_Response_1>
  </Body>
</Envelope>
```



```
</Body>
</Envelope>
```

14.9 Set User Group Membership (SetUserGroupMembership_1)

You can use the SetUserGroupMembership_1 request to add a user to the specified user group like shown in the example below:

XML Sample Request - Setting User Group Membership

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/EntitleAdmin/EntitleAdmin.svc/Anonymous</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2/
      SetUserGroupMembership_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <SetUserGroupMembership_Request_1 xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2">
      <userGroupMembership>
        <userGroupMembershipIdentity>
          <userGroupIdentity>
            <companyID xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2_Company">40171</
              companyID>
            <ID xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2_Company">133</ID>
          </userGroupIdentity>
          <userIdentity>
            <cid_uid xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2_Company">
              <companyID>40171</companyID>
              <ID>32556999</ID>
            </cid_uid>
          </userIdentity>
        </userGroupMembershipIdentity>
      </userGroupMembership>
    </SetUserGroupMembership_Request_1>
  </Body>
</Envelope>
```

The response is empty if request was successful:

XML Sample Response - Setting User Group Membership

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/08/08/webservices/rkd/
      EntitleAdmin_2/SetUserGroupMembership_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <SetUserGroupMembership_Response_1 xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2">
      </SetUserGroupMembership_Response_1>
    </Body>
  </Envelope>
```

14.10 Get User Group Membership (GetUserGroupMembership_1)

You can use the GetUserGroupMembership_1 request to list all users in the user group.

XML Sample Request - Retrieving User Group Membership

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/EntitleAdmin/EntitleAdmin.svc/Anonymous</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2/
    GetUserGroupMembership_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetUserGroupMembership_Request_1 xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2">
      <inputFilter>
        <membershipFilter>
          <userIdentity>
            <cid_uid xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2_Company">
              <companyID>40171</companyID>
              <ID>32556999</ID>
            </cid_uid>
          </userIdentity>
        </membershipFilter>
      </inputFilter>
    </GetUserGroupMembership_Request_1>
  </Body>
</Envelope>

```

The request returns the following information:

XML Sample Response - Retrieving User Group Membership

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/08/08/webservices/rkd/
    EntitleAdmin_2/GetUserGroupMembership_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <GetUserGroupMembership_Response_1 xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2">
      <UserGroupMembership>
        <userGroup>
          <companyID xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2_Company">40171</companyID>
          <ID xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2_Company">117</ID>
        </userGroup>
        <user>
          <cid_uid xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2_Company">
            <companyID>40171</companyID>
            <ID>32556999</ID>
          </cid_uid>
        </user>
        <status>1</status>
      </UserGroupMembership>
      <UserGroupMembership>
        <userGroup>
          <companyID xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2_Company">40171</companyID>
          <ID xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2_Company">119</ID>
        </userGroup>
        <user>
          <cid_uid xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2_Company">
            <companyID>40171</companyID>
            <ID>32556999</ID>
          </cid_uid>
        </user>
        <status>1</status>
      </UserGroupMembership>
    </GetUserGroupMembership_Response_1>
  </Body>
</Envelope>

```




```

    <companyID xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2_Company">40171</companyID>
    <ID xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2_Company">133</ID>
  </userGroup>
  <user>
    <cid_uid xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2_Company">
      <companyID>40171</companyID>
      <ID>32556999</ID>
    </cid_uid>
    <status>1</status>
  </user>
</UserGroupMembership>
</GetUserGroupMembership_Response_1>
</Body>
</Envelope>

```

14.11 Remove User Group Membership (RemoveUserGroupMembership_1)

You can use the RemoveUserGroupMembership_1 request to remove all entitlements associated with the specified user group.

XML Sample Request - Removing User Group Membership

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/EntitleAdmin/EntitleAdmin.svc/Anonymous</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2/
    RemoveUserGroupMembership_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <RemoveUserGroupMembership_Request_1 xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2">
      <userGroupMembership>
        <userGroupIdentity>
          <companyID xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2_Company">40171</companyID>
          <ID xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2_Company">133</ID>
        </userGroupIdentity>
        <userIdentity>
          <cid_uid xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2_Company">
            <companyID>40171</companyID>
            <ID>32556999</ID>
          </cid_uid>
        </userIdentity>
      </userGroupMembership>
    </RemoveUserGroupMembership_Request_1>
  </Body>
</Envelope>

```

The response is empty if request was successful:

XML Sample Response - Removing User Group Membership

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/08/08/webservices/rkd/
    EntitleAdmin_2/RemoveUserGroupMembership_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <RemoveUserGroupMembership_Response_1 xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2">
    </RemoveUserGroupMembership_Response_1>
  </Body>
</Envelope>

```



```
</Body>
</Envelope>
```

14.12 Get User Group (GetUserGroup_1)

You can use the GetUserGroup_1 request to retrieve the company's user groups.

XML Sample Request - Retrieving User Group

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/EntitleAdmin/EntitleAdmin.svc/Anonymous</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2/
      GetUserGroup_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetUserGroup_Request_1 xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2">
      <inputFilter>
        <userGroupIdentity>
          <companyID xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2_Company">47319</companyID>
          <ID xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2_Company">6</ID>
        </userGroupIdentity>
      </inputFilter>
    </GetUserGroup_Request_1>
  </Body>
</Envelope>
```

The following information is returned in the response:

XML Sample Response - Retrieving User Group

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/08/08/webservices/rkd/
      EntitleAdmin_2/GetUserGroup_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <GetUserGroup_Response_1 xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2">
      <userGroup>
        <userGroupIdentity>
          <companyID xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2_Company">47319</companyID>
          <ID xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleAdmin_2_Company">6</ID>
        </userGroupIdentity>
        <userGroupName>A Test user group 12345</userGroupName>
        <description>this is a test user group 2</description>
      </userGroup>
    </GetUserGroup_Response_1>
  </Body>
</Envelope>
```



chapter 15 Entitlement Requests

The Entitlements 2 service allows the user to request permission to view documents of other companies. The request sent by the client (buy side) can be either approved or declined by the broker (sell side).

The Entitlements 2 service exposes a complete set of operations necessary to manage entitlement request lifetime and gather comprehensive statistics.

The Entitlements 2 service differs from the Entitlements service in having two optional attributes - <userId> and <companyId> to add administrative functions to the service. Requests and other attributes are the same as in the Entitlements service.

The following operations are available:

- **Create Entitlement Request (CreateEntitlementRequest_1)** - facilitates the creation of a new entitlement request.
- **Get Contributor List (GetContributorList_1)** - retrieves a list of contributors.
- **Get Entitlement Request List (GetEntitlementRequestList_1)** - retrieves the list of entitlement requests according to the specified filtering criteria.
- **Get Last Client Contact (GetLastClientContact_1)** - retrieves the last contact information submitted by the client.

15.1 Authentication/Authorization, Service Endpoint, and Required Headers

Authorization

All requests to the Entitlement Requests web service require an authorization token. For details, see section Understanding Authentication Tokens.

Authentication

Entitlements Requests uses Reuters impersonation tokens for each effective user. In this case, Thomson Reuters must create each user before your application authenticates them. Unmanaged effective users are not supported in Entitlements Requests.

For additional information, see section Creating a Token.

Service Endpoint

Entitlements Requests 2 Endpoint

<http://api.rkd.reuters.com/api/EntitleReq/EntitleReq.svc>

Required Header

Required HTTP Headers

POST /api/EntitleReq/EntitleReq.svc HTTP/1.1
Content-Type: application/soap+xml
Host: api.rkd.reuters.com
Content-Length: [length]

15.2 WSDL

WSDL:

http://api.rkd.reuters.com/schemas/EntitleReq/wsdll/EntitleReq_2_HttpAndRKDToken.wsdl



15.3 Create Entitlement Request (CreateEntitlementRequest_1)

The CreateEntitlementRequest_1 request is used to create a new entitlement request.

The following example shows how to create new entitlement requests with "235236" and "235237" IDs.

XML Sample Request - Creating Entitlement Request

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/EntitleReq/EntitleReq.svc/Anonymous</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleReq_2/
    CreateEntitlementRequest_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <CreateEntitlementRequest_Request_1 xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleReq_2">
      <Contact userId="34" companyId="354" userName="<user's name>" jobFunction="<user's job function>" division="<division_name>"
      address="62 Elm str" cityState="New York" country="USA" telephone="phone_number" email="bill.name@reuters.com"/>
      <ContributorRequest id="235236" contactName="john.wer" contactPhone="34532545" contactEmail="john.wer@reuters.com">
        <Comment>any_comments</Comment>
      </ContributorRequest>
      <ContributorRequest id="235237" contactName="ctb_contactName" />
    </CreateEntitlementRequest_Request_1>
  </Body>
</Envelope>
```

The user can specify the following contact details in the request:

- User Name - Is limited to 64 characters max.
- User ID - user's ID.
- Company ID - company's ID.
- Job Function - See section User Job Roles for more information. The value is limited to 32 characters max.
- Division - Is limited to 32 characters max.
- Address - Is limited to 256 characters max.
- City State - Is limited to 50 characters max.
- Country - See section Country for country codes. The value is limited to 50 characters max.
- Telephone - Is limited to 32 characters max.
- E-mail - Is limited to 64 characters max.

Except Contributor ID (mandatory), you can provide the following information:

- Contact Name - contributor's contact name (limited to 64 characters).
- Contact Phone - contributor's phone number (limited to 24 characters).
- Contact E-mail - contributor's e-mail address (limited to 256 characters).
- Comment - comments for the specified contact.

Note: If you do not specify User ID and Company ID (leave fields blank), system will automatically add to the request Company ID and User ID of the current user. If you specify only User ID or only Company ID system will respond with an error.

The response returns Request IDs, which identify the IDs of the newly created entitlement requests:

XML Sample Response - Creating Entitlement Request

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/08/08/webservices/
    rkd/EntitleReq_2/CreateEntitlementRequest_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
```



```

<Body>
  <CreateEntitlementRequest_Response_1 xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleReq_2">
    <Ids>
      <Id value="235236"/>
      <Id value="235237"/>
    </Ids>
  </CreateEntitlementRequest_Response_1>
</Body>
</Envelope>

```

15.4 Get Contributor List (GetContributorList_1)

The GetContributorList_1 request retrieves a list of contributors. The user can request entitlements from the contributors from this list and this list also has contributors for whom the user is currently entitled.

The following example retrieves the list of contributors for userId "32558051" and companyId "40171":

XML Sample Request - Retrieving Contributor List

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/EntitleReq/EntitleReq.svc/Anonymous</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleReq_2/GetContributorList_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetContributorList_Request_1 xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleReq_1" listType="DefaultList" companyId="40171" userId="32558051"/>
  </Body>
</Envelope>

```

Attribute	Description
listType	Specifies the amount of detail required in the response. Can contain the following values: DefaultList - name, entitlement status, and the most recent update date only.
userId	Defines User ID.
companyId	Defines Company ID.
CtbIds	Contains Contributor IDs which the response should be limited to.

Note: If you do not specify User ID and Company ID (leave fields blank), system will automatically add to the request Company ID and User ID of the current user. If you specify only User ID or only Company ID system will respond with an error.

The request retrieves the following contributor list:

XML Sample Response - Retrieving Contributor List

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleReq_2/CreateEntitlementRequest_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <GetContributorList_Response_1 xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleReq_2">
      <Contributor entitlementStatus="Entitled" id="20247" name="A&A Actionbank"/>
      <Contributor date="2008-05-13T18:11:00" entitlementStatus="RequestDeclinedByReuters" id="1013" name="ABG Sundal Collier"/>
      <Contributor entitlementStatus="Entitled" id="14576" name="ABN AMRO - Fixed Income (Historical)"/>
      <Contributor entitlementStatus="Entitled" id="6618" name="ABN AMRO Asia Limited (Historical)"/>
    </GetContributorList_Response_1>
  </Body>
</Envelope>

```



```

<Contributor entitlementStatus="Entitled" id="5060" name="ABN AMRO Australia (Historical)"/>
<Contributor entitlementStatus="Entitled" id="2852" name="ABN AMRO Europe (Historical)"/>
<Contributor date="2008-09-10T09:28:12" entitlementStatus="RequestReceived" id="109" name="ABN AMRO Global Research"/>
<Contributor entitlementStatus="Entitled" id="4205" name="ABN AMRO Ireland (Historical)"/>
<Contributor entitlementStatus="Entitled" id="12865" name="ABN AMRO Latin America (Historical)"/>
<Contributor date="2008-05-13T18:17:00" entitlementStatus="RequestDeclinedByBroker" id="7530" name="ABN AMRO Morgan
Ltd"/>
<Contributor entitlementStatus="Entitled" id="6471" name="ABN AMRO Securities Japan Limited (Historical)"/>
<Contributor entitlementStatus="Entitled" id="39612" name="Abu Dhabi Investment Company (ADIC)"/>
.....
<Contributor entitlementStatus="None" id="11136" name="WR Hambrecht + Co."/>
<Contributor entitlementStatus="Entitled" id="11395" name="Wunderlich Research Partners"/>
<Contributor entitlementStatus="Entitled" id="22482" name="Yuanta Investment Consulting"/>
<Contributor entitlementStatus="Entitled" id="26989" name="Zacks Investment Research Inc."/>
<Contributor entitlementStatus="Entitled" id="37943" name="Zero2IPO Financial Management Consultancy(Beijing)Ltd."/>
<Contributor entitlementStatus="Entitled" id="41609" name="Zero2IPO Group"/>
<Contributor entitlementStatus="Entitled" id="36351" name="Zheshang Securities Co.,LTD"/>
</GetContributorList_Response_1>
</Body>
</Envelope>

```

15.5 Get Entitlement Request List (GetEntitlementRequestList_1)

The GetEntitlementRequestList_1 request retrieves the list of Entitlement requests according to the supplied filtering criteria.

The following example retrieves all entitlements requests for the company with Company ID '40171':

XML Sample Request - Retrieving Entitlement Request List

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/EntitleReq/EntitleReq.svc/Anonymous</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleReq_2/
    GetEntitlementRequestList_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetEntitlementRrequestList_Request_1 xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleReq_2"
    detailLevel="DefaultLevel">
      <Filter>
        <ClientCriteria>
          <CompanyUser companyId="40171"/>
        </ClientCriteria>
      </Filter>
    </GetEntitlementRequestList_Request_1>
  </Body>
</Envelope>

```

Attribute	Description
detailLevel	Specifies how much data must be returned in the response: • DefaultLevel - returns all data except StatusChange trail. • AllLevel - returns Default + StatusChange trail.
maxRecords	Defines maximal number of records to be returned.
RecordCriteria	Specifies filter criteria based on specific request traits such as request id/status. • Id - request ID. • Status - specifies request status. Can have the following values: • None • Entitled



	- Request closed - Request declined by Thomson Reuters - Request declined by broker - Request forwarded to broker - Request received DateRange - specifies the date range of requests to be returned.
ClientCriteria	Specifies filter criteria based on specific client data. Client Type - specifies type of client. Can have the following values: Company user - denotes user who belongs to a company. Company level based user - denotes user accounted for contributors supporting Company Level Entitlements. userId - Defines User ID. companyId - Defines Company ID. Corporate Flag. Can have the following values: - Corporate - Non corporate - Both Client Name - defines client name.
CtbCriteria	Specifies filter criteria based on specific Contributor data. CtbId - specifies contributor's ID. CtbName - specifies contributor's name.

Note: In this request you can either specify just Company ID to retrieve list of entitlement requests for a particular company OR Company ID with User ID to retrieve list of entitlement requests for a certain user of a particular company. If you do not specify anything (leave fields blank), system will automatically add to the request Company ID and User ID of the current user.

The response returns all entitlements requests for the company with Company ID '40171':

XML Sample Response - Retrieving Entitlement Request List

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleReq_2/CreateEntitlementRequest_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <GetEntitlementRequestList_Response_1 xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleReq_2">
      <EntitlementRequest createdDate="2007-12-03T10:31:51" id="15649" status="RequestClosed" statusChangedDate="2007-12-20T07:58:00">
        <ContactEx address="" cityState="" companyId="40171" country="" division="" email="JohnDoe@EntitlementsTest.com" jobFunction="" telephone="81-3-5405-0422" userId="32475125" userName="Doe, John" companyName="TMC - Test API Company 1 (IM - US)" loginName="JohnDoe7"/>
        <CtbContact contact="test7" email="test7" id="765" name="Cathay Financial Inc." phone="test7"/>
      </EntitlementRequest>
      <EntitlementRequest createdDate="2007-12-03T10:31:52" id="15650" status="RequestClosed" statusChangedDate="2007-12-20T07:46:00">
        <ContactEx address="" cityState="" companyId="40171" country="" division="" email="JohnDoe@EntitlementsTest.com" jobFunction="" telephone="81-3-5405-0422" userId="32475125" userName="Doe, John" companyName="TMC - Test API Company 1 (IM - US)" loginName="JohnDoe7"/>
        <CtbContact contact="test8" email="test8" id="10009" name="Collins Stewart LLC" phone="test8"/>
      </EntitlementRequest>
      <EntitlementRequest createdDate="2008-07-16T12:35:00" id="15651" status="RequestDeclinedByReuters" statusChangedDate="2008-07-16T12:35:00">
        <ContactEx address="" cityState="" companyId="40171" country="" division="" email="JohnDoe@EntitlementsTest.com" jobFunction="" telephone="81-3-5405-0422" userId="32475125" userName="Doe, John" companyName="TMC - Test API Company 1 (IM - US)" loginName="JohnDoe7"/>
        <CtbContact contact="test9" email="test9" id="21613" name="Craig Hallum" phone="test9"/>
      </EntitlementRequest>
      ....
      <EntitlementRequest createdDate="2008-10-10T10:18:02" id="25917" status="RequestReceived" statusChangedDate="2008-10-10T10:18:02">
        <ContactEx address="contact address" cityState="contact state" companyId="40171" country="contact country" division="contact division" email="contact@email.com" jobFunction="contact job func" telephone="contact phone 2222222" userId="32556999" userName="contact userName" companyName="TMC - Test API Company 1 (IM - US)" loginName="tmc_qaadminservice"/>
      </EntitlementRequest>
    </GetEntitlementRequestList_Response_1>
  </Body>
</Envelope>
```



```

        <CtbContact contact="ctb contactName" email="ctb_contactEmail@email.com" id="128" name="Auerbach Grayson & Co.,
        Inc." phone="ctb_contactPhone 3333333"/>
    </EntitlementRequest>
    <EntitlementRequest createdDate="2008-10-15T11:00:38" id="25918" status="RequestReceived" statusChangedDate="2008-10-
    15T11:00:38">
        <ContactEx address="contact address" cityState="contact state" companyId="40171" country="contact country" division="contact
        division" email="contact@email.com" jobFunction="contact job func" telephone="2222222" userId="32558052"
        userName="contact userName" companyName="TMC - Test API Company 1 (IM - US)" loginName="tmc_devadminservice"/>
        <CtbContact contact="ctb contactName" email="ctb_contactEmail@email.com" id="7426" name="Davenport & Company,
        LLC" phone="3333333"/>
    </EntitlementRequest>
</GetEntitlementRequestList_Response_1>
</Body>
</Envelope>

```

15.6 Get Last Client Contact (GetLastClientContact_1)

The GetLastClientContact_1 request retrieves the last contact information submitted by the client.

The following example retrieves last contact information submitted by user with User ID '32558052' and Company ID '40171':

XML Sample Request - Retrieving Last Client Contact

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/EntitleReq/EntitleReq.svc/Anonymous</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleReq_2/
    GetLastClientContact_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetLastClientContact_Request_1 xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleReq_2" companyId="40171"
    userId="32558052"/>
  </Body>
</Envelope>

```

Attribute	Description
userId	Defines User ID.
companyId	Defines Company ID.

The request retrieves the last contact information submitted by the client.

Note: If you do not specify User ID and Company ID (leave fields blank), system will automatically add to the request Company ID and User ID of the current user. If you specify only User ID or only Company ID system will respond with an error.

Note: The field will be empty if there are no records.

XML Sample Response - Retrieving Last Client Contact

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/08/08/webservices/
    rkd/EntitleReq_2/CreateEntitlementRequest_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <GetLastClientContact_Response_1 xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/EntitleReq_2">
      <Contact address="contact address" cityState="contact state" companyId="40171" country="contact country" division="contact

```




```

division" email="contact@email.com" jobFunction="contact job func" telephone="2222222" userId="32558052" userName="contact
userName"/>
</GetLastClientContact__Response_1>
</Body>
</Envelope>

```

15.7 How Does Get Contributor List Operation Work

This section gives details on how the GetContributorList_1 operation works. The operation takes the following parameters as **input data**:

- **Company ID**
- **UserID**
- **ContributorID (BrokerID)**
- **ChannelID**
- **MemberFirm**

After you have specified necessary input values and submitted the request, TRKD API will perform the following:

1. Get the list of Broker IDs that are restricted for the user.
2. Get Company Entitlement Category.
3. Get Geography Policy for the current user.
4. Create temporary Entitlements table with all entitled and potential contributors taking into consideration contributor ID (if provided into input parameters).
5. Apply all policies to the table (refer to section Rules of retrieving contributors).
6. Update status in temporary Entitlements table (possible values: "Entitled", "Request Closed", "Request Declined - By Broker", "Request Declined - By Reuters", "Request Forwarded to Broker", "Request Received") with the values from Entitlement Request table.
7. In temporary Entitlements table set status to "none" for records with "entitled" status without the corresponding row in DocAccess table (records with undefined company ID, user group ID, document group id in DocAccess table).
8. Get Brokers from temporary Entitlements table verifying that the broker it is not disabled and belongs to the defined channel ID.

As a result, you get the following values in the response:

- **BrokerID**
- **BrokerName**
- **EntitlementStatus**
- **RequestStatusID**
- **Date**

15.7.1 Rules for Retrieving Contributors

There are different policies applied by TRKD API to users, contributors, documents, etc.

- **Geography policy:** each user belongs to different user groups (even users from one company can belong to different user groups!), geography policy takes into consideration the company the user belongs to and the user group the user belongs to.
- **Approval Policy:** there are number of document groups assigned to a company and each document group has its own approval policy - the document group must have "preapproval" (distribution to general groups with pre-approval only) or "postapproval" (default distribution to all buy-side with possible later restrictions) document group's policy.
- **Pricing Policy:** each document group has its own pricing policy - the pricing policy should be "Subscription".
- **Receipt Policy:** the user group must have "Public" receipt policy (full access).

15.7.2 Example

Let us have a look at the example how all this works in TRKD API:

Use the following user login: rkapiadministrator1@reuters.com

Open GetContributorList_1 request and specify the following **input parameters**:

- **CompanyID=30373**
- **UserID=32188604**
- **ContributorID=NULL**
- **ChannelID=0**
- **MemberFirm=NULL**

As it was described earlier, TRKD API will do the following:

1. Get Document Group Company ID (Broker ID) restrictions for the user: **none**.
2. Get Company Entitlement Category: **Buyside**.
3. Apply Geography Policy for the current user: **U.S., All, US/Japan/Canada**.
4. Create temporary Entitlements table by applying all the policies (see the diagram in Creation of Temporary Entitlements Table).
5. Set status to "none" for the records with temporary "entitled" status without the corresponding row in DocAccess table.
6. Get Brokers from the temporary Entitlements table verifying the company it is not disabled.

As a result, you will get the following output data:

Bro ker ID	BrokerName	EntitlementStatus	RequestStatus _ID	Date
261 64	0000 Adam test company	None	-1	NULL
202 47	A&A Actienbank	Entitled	1	NULL
364 12	Abaxbank - Banca d'Investimento	Entitled	1	NULL
101 3	ABG Sundal Collier	Request Declined - By Reuters	3	2008-12-17 06:55:00.000
145 76	ABN AMRO - Fixed Income (Historical)	Entitled	1	NULL
...				

15.7.3 Possible Policy Values

Company Entitlement Category:

- Buyside (this is for Document Group Entitlement Category - multiple Research Categories map to one Entitlement Category. Buyside=2, 100, 101, 23, 27, 17, 26, 37)
- Corporates (Res. Cat. #13)
- Press (Res. Cat. #11)
- Sellside/Univ (Sellside/Universities Res. Cat - 1,4,5,6,8,18,19,24,25,33,34,35,39. Univ - #22)

Geography policy:

- All
- Canada
- Excl. US
- Excl. US/Japan/Canada
- U.S
- US/Japan/Canada

Approval policy:

- Private (internal distribution or distribution only to certain groups)
- Preapproval (distribution to general groups with only)
- Postapproval (default distribution to all buyside with possible later restrictions)

Pricing policy:

- PPV - Broker



- PPV-Broker-Promotional
- PPV-Third Party
- PPV-Third Party-Promotional
- Premium-Broker
- Premium-Third Party
- Subscription

Receipt policy:

- Private
- Public
- User-Level

15.7.4 Why Users Cannot Get Document from the Contributors They Are Entitled to

If the user is not a member of **Public** user group which is entitled to particular contributor, the user will see this contributor as entitled, even though the user doesn't have access to this contributor. This was done to prevent repeated requests for entitlements from clients who are already entitled through their public group.

15.7.5 Why Users Cannot Access the Document Their Colleagues Have Access to

All users belong to certain users groups, even users from the same company can belong to different users group, which means their contributors may differ. As a result they will have access to different documents.

15.7.6 Why Is Get Contributor List Operation Often Confused with Get Information Operation from the Reference Information service

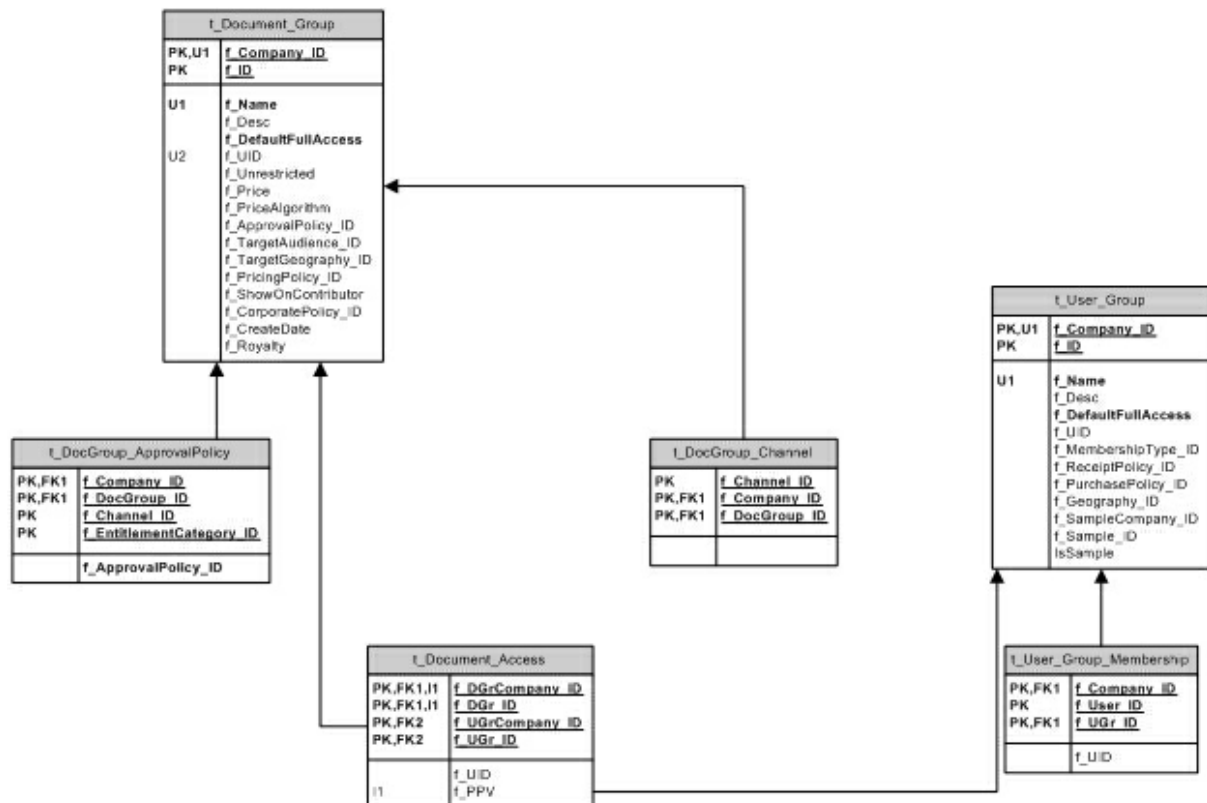
Like GetContributorsList_1 operation the GetInfo_1 operation from the Reference Information service with specified "contributor" criteria returns the list of contributors and applies all the policies mentioned for Get Contributors List. But depending on the "**Criterion**" parameter the GetInfo_1 operation provides information about all contributors (full list), company contributors and users contributors.

The GetContributorList_Request_1 is only supposed to be used to show ROS-enabled users what contributors they're entitled to **and** what contributors they **can request approval to** (it will show all of these as entitled, whether they actually are or not). For the user who doesn't appear to be ROS-enabled, you must use the "GetInfo_1" request (under the "References Information" API) to find out what contributors they are actually entitled to.

15.7.7 Creation of Temporary Entitlements Table

The diagram below shows the process of creating temporary Entitlements table:





15.8 Handling Error Codes

The following subcodes representing 3 logical groups of possible errors have been implemented for the Entitlement Requests 2 service:

- **Failed** - indicates various errors returned by the service.
- **ServiceCustomConfigError** - indicates errors caused by incorrect service custom configuration nodes.
- **BusinessRuleViolation** - indicates errors caused by requests which break service business rules.

Note: An error message with the "BusinessRuleViolation" subcode has been added: "Attributes 'companyId' and 'userId' are interdependent. Either both or none of them should be specified". This error appears when a service user tries to send a request with only one user credential ('userId' or 'companyId') instead of specifying both of them or none of them. However, in the following case a request with single credential will not cause this error: the "GetEntitlementRequestList_Request_1/Filter/ClientCriteria/CompanyUser/@companyId" attribute can be specified without the accompanying 'userId' (**but not vice versa!**).



chapter 16 Estimates

The Reuters Estimates database consists of global estimates for over 15,000 active and 10,000 inactive companies. It contains all estimates types and periods that Thomson Reuters collects and is designed to allow Thomson Reuters to expand their offering seamlessly. This service allows clients to access and manipulate the following sets of data collected by Thomson Reuters:

- Consensus estimates and ratings
- Actuals
- Broker and Analyst Information
- Consensus Analysis (looking back up to 18 months)
- Basic Company Information

Not all items are available for all companies. Thomson Reuters aims to provide the key investment variables for all markets. However, in certain markets some data types are simply not available in significant quantities due to the standards and practices inherent in that region.

You can use the following operations to retrieve Estimates information:

- **Get Reference Information:** (GetReferenceInformation_1)
- **Get Security Information:** (GetSecurityInformation_1)
- **Get Meta Information:** (GetMetaInformation_1)
- **Get Broker Coverage Information:** (GetBrokerCoverageInformation_1)
- **Get Consensus:** (GetConsensus_1)
- **Get Detailed:** (GetDetailed_1)

16.1 Authentication/Authorization, Service Endpoint, and Required Headers

Authorization

All requests to the Thomson Reuters Estimates web service require an authorization token. For details, see section Understanding Authentication Tokens.

Authentication

Thomson Reuters Estimates uses Reuters impersonation tokens for each effective user. In this case, Thomson Reuters must create each user before your application authenticates them. Unmanaged effective users are not supported in Reuters Estimates.

For additional information, see section Creating a Token.

Service Endpoint

Reuters Estimates Endpoint

`http://api.rkd.reuters.com/api/Estimates/Estimates.svc`

Required Header

Required HTTP Headers

POST /api/Estimates/Estimates.svc HTTP/1.1
 Content-Type: application/soap+xml
 Host: api.rkd.reuters.com
 Content-Length: [length]



16.2 WSDL

WSDL:

http://api.rkd.reuters.com/schemas/Estimates/wsdl/Estimates_1_HttpAndRKDTToken.wsdl

16.3 General Product Information

This chapter provides explanation on the following general information a product can contain - date and time standards, data coverage, company definition, consensus currency, adjustments for capital changes, unit sizes, periods, consensus methodology, supplemental recommendations and expected announcement dates.

16.3.1 Date and Time Standards

Where possible, Thomson Reuters utilizes XML standards for providing dates and times. The following date and time masks are used:

Type	Mask
Date and time	yyyy-mm-ddThh:mm:ss
Year only	yyyy
Year and month	yyyymm
Year, month and day	yyyy-mm-dd

Note: All times in all files will be provided in GMT. This time will not be adjusted for daylight saving times.

16.3.2 Definition of a Company in Thomson Reuters Estimates

The purpose of Thomson Reuters Estimates in general is to fully represent estimates in the most appropriate fashion as intended by contributing brokers. In the Thomson Reuters Estimates service each company, in the eyes of the broker, has its record. However, users of the data should be aware that for various reasons one company in the real world may have two separate records in this service. An example of such an occurrence is HSBC where there are major listings on both the London Stock Exchange and the Hong Kong Stock Exchange. Currently both listings will have separate sets of Estimates. The reason for this is that each listing will produce separate accounts based on different accounting standards and as such brokers treat them as two separate companies.

This representation of the equities world differs from the world of equities portrayed by equity identifiers and vendors of equities related data. As a result, clients need to pay extra attention when integrating the Estimates API since there is a one to many relationship between a company in the clients eyes and Estimates Records. Thomson Reuters recommends that if at all possible this relationship is maintained and both records are shown.

16.3.3 Consensus Currency

Thomson Reuters often receives data for a given company in a variety of different currencies, either at a given point in time, or over time. Examples would include companies in the Euro zone, companies which switch domiciles or companies that have changed their reporting currency to come in line with an industry or sector norm.

The Thomson Reuters database allows the addition of data in multiple currencies but will supply all estimates to clients in only one currency, known as the consensus currency. When data is received in any currency other than the consensus currency it is translated into the consensus currency using the exchange rate applicable from the date the estimate was made by the broker. This ensures that Thomson Reuters Estimates are comparable and allows an accurate consensus calculation without having problems with exchange rate fluctuations and consensus recalculations due to changes in exchange rates.

The current consensus currency will, generally, be the currency of the country of primary listing; however, there will be exceptions. The decision as to what currency should be used depends on the company in question. Some examples of situations where a currency may be different to the country of primary listing are as follows:



- ADRs will be provided in the currency of the listing location (USD) rather than in the company's local currency.
- Often to conform to an industry norm companies may also report in different currencies, for example Oil, Gas and Mining companies will often report in US Dollars or the currency may relate to the main market in which the company trades.
- The US dollar may be used as a forecasting currency in emerging markets where the currencies are weak or unstable.

16.3.4 Adjustments for Capital Changes

All data is adjusted to reflect the current share capital of a company. When a capital change is applied to the Thomson Reuters database, this will automatically be applied to all data sets. Clients should note that capital changes are updated on the X-date and as such, the corporate event will not be reflected until that night, unless the client is using the service in real time.

Thomson Reuters will refresh the data to reflect the new share capital in the daily file following the capital change effective date. The company information section contains the most recent capital change and effective date. Users wishing to track these can do so by monitoring this section over time. Care must be taken when using real time pricing alongside the Estimates service.

Note: The terms capital change and share split are used interchangeably by Thomson Reuters in relation to estimates.

16.3.5 Unit Sizes

Each monetary data value will be supplemented by a unit size. For any given currency, the data will always be provided in the same unit size for all aggregate (per company) numbers and also for all per share numbers. The default size for aggregate data is millions and the default size for per share data is units.

Unit Code	Description
U	Units
T	Thousands
M	Millions
B	Billions
P	Percentage
MC	Minor Currency (0.01 of a Unit)

16.3.6 Periods

The service is designed to handle periods of all lengths. As well as the period end date, periods will be identified by the use of separate period identifiers. Where there are multiple periods per fiscal period, these will also carry a numeric value, whereby 1 will be the first in the fiscal period, 2 the second and so on:

Period	Identifier	Maximum Period Number
Annual	A	1
Semi-Annual	S	2
Quarterly	Q	4
Trimester*	T	3
Monthly*	M	12

* Currently reserved for future use

16.3.7 Consensus Methodology

Thomson Reuters provides two different consensus types for monetary values.

Method	Description of methodology



Mean	A straight mathematical mean, after excluding any numbers which Thomson Reuters knows to be out of date or made on a different basis. Thomson Reuters manually excludes these numbers.
Median	A mathematical median. In addition as with the Mean calculation Thomson Reuters may exclude any forecasts it knows to have been made on a different basis, or which have been overtaken by events.

Our Consensus Recommendation methodology assigns a numerical value from one to five to each broker-specific recommendation. Where possible Thomson Reuters will capture the substance of the recommendation rather than its ascribed name. We work with our contributors to ensure that we map our numerical rating to their preferred value. As such some broker-specific "Buy" recommendations may map to a value of 1, whereas others may map to a value of 2.

Recommendation	Value
Buy	1
Outperform	2
Hold	3
Underperform	4
Sell	5
No opinion	6

Thomson Reuters also provides a consensus recommendation score for each company. This is a straight arithmetic mean rating based upon the standard values above, excluding the "No Opinion" recommendations. This is then given a textual label as follows:

Mean Rating Range	Consensus Recommendation
Less than or equal to 1.5 but greater than zero	Buy
Less than or equal to 2.5 but more than 1.5	Outperform
Less than or equal to 3.5 but more than 2.5	Hold
Less than or equal to 4.5 but more than 3.5	Underperform
More than 4.5 but less than or equal to 5	Sell
Zero	No opinions

16.3.8 Supplemental Recommendations

In addition to Short-Term Recommendations, Thomson Reuters provides Supplemental Recommendations, which follow the Short-Term Recommendations schema for detailed data. However, please note that due to the nature of Supplemental Recommendations, a consensus will not be provided.

16.3.9 Expected Announcement Dates

Thomson Reuters provides Expected Announcement Dates as an additional attribute under the <CompanyPeriods> element in the Estimates service. There are three key attributes for Expected Announcement Dates, which are noted in the following:

- **expectDate:** Date and time that company is expected to announce earnings.
- **dateStatus:** Describes whether or not an event is "C" confirmed or "T" tentative.
- **marketPhase:** Describes what part of the day a company is expected to report earnings, Before Market Opens = "1", During Market Opens = "2" or After Market Closes = "3".

16.4 Company Section – Supplemental Information

In the company section Thomson Reuters Estimates provides four flags to assist clients with particular issues they might come up against. Clients are under no obligation to use these flags; however, they can be useful when making decisions on how to

display/use Thomson Reuters Estimates data.

16.4.1 Primary Consensus Type

The Primary Consensus Type shows which consensus Thomson Reuters recommends be used for each company.

16.4.2 Primary Estimate Type

For North American Real Estate Investment Trust companies (REITs) the primary estimate type is Funds from Operations rather than EPS.

Description	Code
Earnings Per Share	EPS
Funds From Operation	FFO

16.4.3 Primary Earnings Type

Thomson Reuters provides estimates on up to three different bases of EPS and Profit for companies where this information is available and valuable. Many users will only wish to display one type of EPS and profit in views on the data. In order to pick the correct bases on a company per company basis it is necessary to refer to this field in the company file.

The primary measure is calculated by constantly reviewing current data. The algorithm looks at the depth of data available on each basis for Fiscal Year 1 annual EPS and bases the results on this. Thomson Reuters recommends that clients use the same basis for EPS and Profit.

Description	Code
Earnings Per Share Pre Exceptional	EPS
Earnings Per Share GAAP	EPSREP
Earnings Per Share Pre Exceptional and Per Goodwill	EBG

16.4.4 Primary Periodicity Type

In addition to annual data, Thomson Reuters provides interim estimates where available (currently, Quarterly and Semiannual; Trimester and Monthly estimates may be provided in the future). Based on how estimates are supplied to us by contributing brokers, both semi-annual and quarterly data may be provided at the same time for some companies. Thomson Reuters provides a Primary Periodicity Type flag to assist clients in identifying the primary interim reporting cycle (quarterly or semi-annual) as defined by Thomson Reuters for each company.

Description	Code
Annual	A
Interim (Semi-Annual)	S
Quarterly	Q
Trimester*	T
Monthly*	M

* Currently reserved for future use.

16.4.5 The Current Fiscal Year

To help with modeling Thomson Reuters provides the current fiscal year in the element <curFiscalPeriod>. The current period element can have three values: Q for Quarter, S for Semi Annual or A for Annual. The rules are as follows:

- If a company reports only annually, it is A.
- If a company reports annually and semiannually, it is S.
- If a company reports annually and quarterly, it is Q.
- If a company reports annually, quarterly and semiannually, it is Q.

16.5 Thomson Reuters Estimates Requests

This chapter provides information on requests found in Thomson Reuters Estimates and it has general examples for each request. The available requests are:

- **Get Reference Information** (GetReferenceInformation_1): Retrieves Estimates reference information.
- **Get Security Information** (GetSecurityInformation_1): Retrieves Estimates security information.
- **Get Meta Information** (GetMetaInformation_1): Retrieves Estimates meta information.
- **Get Broker Coverage** (GetBrokerCoverageInformation_1): Retrieves Estimates broker coverage information.
- **Get Consensus** (GetConsensus_1): Retrieves Estimates consensus information.
- **Get Detailed** (GetDetailed_1): Retrieves Estimates detailed information.

16.5.1 Understanding Reuters Estimates Request

The following example shows the existing attributes in Thomson Reuters Estimates requests:

XSD

XSD: http://api.rkd.reuters.com/schemas/Estimates/Estimates_1.xsd

XML Sample Reuters Estimates Request

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Estimates/Estimates.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/Estimates_1/GetEarningsEstimates_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetConsensus_Request_1 xmlns:xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Estimates_1"
      companyIdType="<Type of companyid>"
      companyId="<Companyid value>"
      lang="<Language code> (optional)"
      FiscalPeriods="<Fiscal periods value> (optional)"
      FiscalPeriodHintsOnly="<Fiscal Period Hint value> (optional)"
      EstimateType="<Estimate type value> (optional)"
      ConsensusType="<Consensus type value> (optional)"
      UsePrimaryEarningsTypeOnly="<Use only Primary Earnings type> (optional)"
      UsePrimaryConsensusTypeOnly="<Use only Primary Consensus type> (optional)"
      UsePrimaryEstimateTypeOnly="<Use only Primary Estimate type> (optional)"
      UsePrimaryPeriodicityTypeOnly="<Use only Primary Periodicity type> (optional)"
      DateType="<Date type value> (optional)"
      HistoricalTrendOnly="<Historical Trend value> (optional)"
      RealTime="<Use Real time> (optional)"
      Periodicity="<Periodicity value> (optional)"
      ShowReferenceInformation="<Show Reference information> (optional)"
      ShowSecurityInformation="<Show Security information> (optional)"
      ShowMetaInformation="<Show Meta information> (optional)"
      ShowBrokerCoverageInformation="<Show Broker Coverage information> (optional)"
      ShowActualInformation="<Show Actual information> (optional)"
      ShowSurpriseInformation="<Show Surprise Information> (optional)"
      HidePeriodic="<Hide periodic> (optional)"
      HideNonPeriodic="<Hide non-periodic> (optional)"
      HideRecommendation="<Hide recommendation> (optional)"
      Category="<Category value> (optional)"
    </GetConsensus_Request_1>
  </Body>
</Envelope>
```



TransactionID ="Transaction ID value"/>
</Body>
</Envelope>

Attribute	Description
companyIdType	This indicates what symbol or identifier that is being used to resolve the company. This can be RIC or Estimate ID. You can use Reuters Search to resolve company identifiers to Estimate ID. Note: Estimate ID allows you to easily select estimates from different accounting standards. See Definition of a Company in Reuters Estimates Snapshots section about company accounting standards.
companyId	This is the actual symbol value that is required to be resolved.
lang	This is the language code for the company which is being resolved. This should be used where possible to assist with the unique resolution of companies especially when trying to resolve tickers. Example: "en-US".
FiscalPeriods	This optional attribute determines the fiscal period(s) to be returned. The attribute accepts years (2010,2011) and does not accept hints (CURR,NEXT). If you want to use hints, you must use the FiscalPeriodHintsOnly attribute.
FiscalPeriodHintsOnly	This optional attribute determines hints for the fiscal periods to be returned. The values can be combined in a comma-separated string to allow for multiple periods and are applied to the Actuals, Detailed Estimates and Consensus Estimate sections. The possible values are: • CURR: Forecast Year 1 (FY1), current fiscal year • NEXT: Forecast Year 2 (FY2) • NEXT2: Forecast Year 3 (FY3) • NEXT3: Forecast Year 4 (FY4) • NEXT4: Forecast Year 5 (FY5) • PRVS: Current Actualized Year (FY0) • PRVS2: Previous Actualized Year (FY-1) • PRVS3: Previous Actualized Year (FY-2) * • PRVS4: Previous Actualized Year (FY-3) * • PRVS5: Previous Actualized Year (FY-4) * • PRVS6: Previous Actualized Year (FY-5) * • not specified: response will contain fiscal year estimates for all fiscal periods * Consensus estimates data will be provided for these periods. Detailed estimates data will not be provided.
EstimateType	(Estimate types) This optional attribute determines the data type(s) to be returned. The values can be combined in a comma separated string to allow for multiple estimate types to be returned and are applied to the Actuals, Detailed Estimates and Consensus Estimate sections. The possible values are: • EPS: Earnings Per Share (Pre Exceptional) • EPSEBG: Earnings Per Share (Pre Exceptional and Pre Goodwill) • EPSREP: Earnings Per Share (As Reported) • FFO: Funds From Operations Per Share • CPS: Cash Flow Per Share • REVENUE: Revenue • DPS: Dividends Per Share • NAV: Net Asset Value • NPROFIT: Net Profit (Pre Exceptional) • NPROFITEBG: Net Profit (Pre Exceptional and Pre Goodwill) • NPROFITREP: Net Profit (As Reported) • PPROFIT: Pre-Tax Profit (Pre Exceptional) • PPROFITEBG: Pre-Tax Profit (Pre Exceptional and Pre Goodwill) • PPROFITREP: Pre-Tax Profit (As Reported) • OPROFIT: Operating Profit • RPROFIT: Recurring Profit • EBITDA: EBITDA • EBIT: EBIT • STOPINION: Short Term Broker Rating • LTGROWTH: Long Term Growth • TARGETPRICE: Target Price • SUPOPINION: Supplemental Opinion • NDEBT: Net Debit • ROA: Return On Assets



	• ROE: Return On Equity • CAPEX: Capital Expenditure • BVPS: Book Value Per Share • SLREVENUE: Software License Revenue • B2BR: Book to Bill Ratio • ARPU: Average Revenue Per Unit • USALES: Unit Sales • T1R: Tier 1 Ratio • SUBSCR: Subscribers • OUTOILGAS: Output - Oil and Gas • \$PRIMARY: Primary estimate (see Glossary for more information) • not specified: response will contain all types of estimates
ConsensusType	This optional attribute determines whether to use Consensus Type.
UsePrimaryEarningsTypeOnly	This optional attribute determines whether to use only Primary Earnings Type when generating the response. The possible values are: • true • false
UsePrimaryConsensusTypeOnly	This optional attribute determines whether to use only Primary Consensus Type when generating the response. The possible values are: • true • false
UsePrimaryEstimateTypeOnly	This optional attribute determines whether to use only Primary Estimate Type when generating the response. The possible values are: • true • false
UsePrimaryPeriodicityTypeOnly	This optional attribute determines whether to use only Primary Periodicity Type when generating the response. The possible values are: • true • false
DateType	This optional value determines the date type to be used in the response. The possible values are: • yyyy-mm-ddThh:mm:ss - date and time • yyyy - year only • yyyymm - year and month • yyyy-mm-dd - year, month and day
HistoricalTrendOnly	The possible values are: • 3MonthTrend - 3 Month Trend • 12MonthTrend - 12 Month Trend • 18MonthTrend - 18 Month Trend • 0To3691218Trend - 0 to 3691218 trend
RealTime	The possible values are: • true • false
Periodicity	This optional value determines for which period data must be collected. The possible values are: • Annual • Interim • SemiAnnual • Trimester • Monthly • Weekly • PeriodicAll
ShowReferenceInformation	This optional attribute determines whether to show Reference Information when generating the response. The possible values are: • true • false
ShowSecurityInformation	This optional attribute determines whether to show Security Information when generating the response. The possible values are:



	• true • false
ShowMetaInformation	This optional attribute determines whether to show Meta Information when generating the response. The possible values are: • true • false
ShowBrokerCoverageInformation	This optional attribute determines whether to show Broker Coverage Information when generating the response. The possible values are: • true • false
ShowActualInformation	This optional attribute determines whether to show Actual Information when generating the response. The possible values are: • true • false
ShowSurpriseInformation	This optional attribute determines whether to show Surprise Information when generating the response. The possible values are: • true • false
HidePeriodic	This optional attribute determines whether to hide Periodic in the response. The possible values are: • true • false
HideNonPeriodic	This optional attribute determines whether to hide Non Periodic in the response. The possible values are: • true • false
HideRecommendation	This optional attribute determines whether to hide Recommendation in the response. The possible values are: • true • false
Category	This indicates The possible values are: • Default • Analysis • AndDetailed
TransactionID	This optional attribute is empty by default.

16.5.2 Get Reference Information (GetReferenceInformation_1)

The following example shows how to retrieve reference information.

XML Sample Request - Retrieving Reference Information

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Estimates/Estimates.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/Estimates_1/GetReferenceInformation_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetReferenceInformation_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Estimates_1"
      companyId="IBM.N"
      companyIdType="RIC"
```



```

lang="en-US"
UsePrimaryEarningsTypeOnly="false"
UsePrimaryConsensusTypeOnly="false"
UsePrimaryEstimateTypeOnly="false"
UsePrimaryPeriodicityTypeOnly="false"
HistoricalTrendOnly="3MonthTrend"
RealTime="false"
Periodicity="PeriodicAll"
ShowReferenceInformation="false"
ShowSecurityInformation="false"
ShowMetaInformation="false"
ShowBrokerCoverageInformation="false"
ShowActualInformation="false"
ShowSurpriseInformation="false"
HidePeriodic="false"
HideNonPeriodic="false"
HideRecommendation="false"
Category="Default"
TransactionID="" />
</Body>
</Envelope>

```

For more details on elements the request contains see section Understanding Reuters Estimates Request.

16.5.3 Get Security Information (GetSecurityInformation_1)

The following example shows how to retrieve security information for Microsoft.

XML Sample Request - Retrieving Security Information

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Estimates/Estimates.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/Estimates_1/
      GetSecurityInformation_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetSecurityInformation_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Estimates_1"
      companyId="MSFT.O"
      companyIdType="RIC"
      lang="en-US"
      UsePrimaryEarningsTypeOnly="false"
      UsePrimaryConsensusTypeOnly="false"
      UsePrimaryEstimateTypeOnly="false"
      UsePrimaryPeriodicityTypeOnly="false"
      HistoricalTrendOnly="3MonthTrend"
      RealTime="false"
      Periodicity="PeriodicAll"
      ShowReferenceInformation="false"
      ShowSecurityInformation="false"
      ShowMetaInformation="false"
      ShowBrokerCoverageInformation="false"
      ShowActualInformation="false"
      ShowSurpriseInformation="false"
      HidePeriodic="false"
      HideNonPeriodic="false"
      HideRecommendation="false"
      Category="Default"
      TransactionID="" />
  </Body>
</Envelope>

```

For more details on elements the request contains see section Understanding Reuters Estimates Request.



16.5.4 Get Meta Information (GetMetaInformation_1)

The following example shows how to retrieve Estimates Meta Information for CISCO.

XML Sample Request - Retrieving Estimates Meta Information

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Estimates/Estimates.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/Estimates_1/GetMetaInformation_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetMetaInformation_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Estimates_1"
      companyId="CSCO.O"
      companyIdType="RIC"
      lang="en-US"
      UsePrimaryEarningsTypeOnly="false"
      UsePrimaryConsensusTypeOnly="false"
      UsePrimaryEstimateTypeOnly="false"
      UsePrimaryPeriodicityTypeOnly="false"
      HistoricalTrendOnly="3MonthTrend"
      RealTime="false"
      Periodicity="PeriodicAll"
      ShowReferenceInformation="false"
      ShowSecurityInformation="false"
      ShowMetaInformation="false"
      ShowBrokerCoverageInformation="false"
      ShowActualInformation="false"
      ShowSurpriseInformation="false"
      HidePeriodic="false"
      HideNonPeriodic="false"
      HideRecommendation="false"
      Category="Default"
      TransactionID="" />
  </Body>
</Envelope>
```

For more details on elements the request contains see section Understanding Reuters Estimates Request.

16.5.5 Get Broker Coverage Information (GetBrokerCoverageInformation_1)

The following example shows how to retrieve Estimates Broker Coverage Information for Vodafone.

XML Sample Request - Retrieving Estimates Broker Coverage Information

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Estimates/Estimates.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/Estimates_1/GetBrokerCoverageInformation_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetBrokerCoverageInformation_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Estimates_1"
      companyId="VOD.L"
      companyIdType="RIC"
    />
  </Body>
</Envelope>
```



```

lang="en-US"
UsePrimaryEarningsTypeOnly="false"
UsePrimaryConsensusTypeOnly="false"
UsePrimaryEstimateTypeOnly="false"
UsePrimaryPeriodicityTypeOnly="false"
HistoricalTrendOnly="3MonthTrend"
RealTime="false"
Periodicity="PeriodicAll"
ShowReferenceInformation="false"
ShowSecurityInformation="false"
ShowMetaInformation="false"
ShowBrokerCoverageInformation="false"
ShowActualInformation="false"
ShowSurpriseInformation="false"
HidePeriodic="false"
HideNonPeriodic="false"
HideRecommendation="false"
Category="Default"
TransactionID="" />
</Body>
</Envelope>

```

For more details on elements the request contains see section Understanding Reuters Estimates Request.

16.5.6 Get Consensus (GetConsensus_1)

The following is a sample request for Vodafone Consensus information.

XML Sample Request - Retrieving Consensus Information

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Estimates/Estimates.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/Estimates_1/GetConsensus_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetConsensus_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Estimates_1"
      companyId="VOD.L"
      companyIdType="RIC"
      lang="en-US"
      UsePrimaryEarningsTypeOnly="false"
      UsePrimaryConsensusTypeOnly="false"
      UsePrimaryEstimateTypeOnly="false"
      UsePrimaryPeriodicityTypeOnly="false"
      HistoricalTrendOnly="3MonthTrend"
      RealTime="false"
      Periodicity="PeriodicAll"
      ShowReferenceInformation="false"
      ShowSecurityInformation="false"
      ShowMetaInformation="false"
      ShowBrokerCoverageInformation="false"
      ShowActualInformation="false"
      ShowSurpriseInformation="false"
      HidePeriodic="false"
      HideNonPeriodic="false"
      HideRecommendation="false"
      Category="AndDetailed"
      TransactionID="" />
  </Body>
</Envelope>

```

For more details on elements the request contains see section Understanding Reuters Estimates Request.



The following sample request is for AOL Time Warner Target Price, EPS and Revenue estimates for the current and next fiscal year including historical consensus for the last 3 months:

XML Sample Request - Get Earnings Estimate for All Aggregate levels and Multiple Estimate Types

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/2006/05/01/Estimates.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/Estimates_1/GetEarningsEstimates_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetConsensus_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Estimates_1"
      companyId="AOL.N"
      companyIdType="RIC"
      FiscalPeriods="CURR,NEXT"
      EstimateType="TARGETPRICE,EPS,REVENUE"
      HistoricalTrendOnly="3MonthTrend"
      Category="Default"/>
  </Body>
</Envelope>
```

The following sample request is for Boots Company, Revenue for all years including historical consensus for the last 12 months:

XML Sample Request - Get Earnings Estimate for All Aggregate levels and Multiple Estimate Types

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/2006/05/01/Estimates.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/Estimates_1/GetEarningsEstimates_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetConsensus_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Estimates_1"
      companyId="BOOT.L"
      companyIdType="RIC"
      EstimateType="REVENUE"
      HistoricalTrendOnly="12MonthTrend"
      Category="Default"/>
  </Body>
</Envelope>
```

16.5.7 Get Detailed (GetDetailed_1)

The following example shows how to retrieve Estimates Detailed Information for Microsoft.

XML Sample Request - Retrieving Estimates Broker Coverage Information

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Estimates/Estimates.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
```



```

<Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/Estimates_1/
GetDetailed_1</Action>
<Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
  <ApplicationID>[AppID]</ApplicationID>
  <Token>[Impersonation Token]</Token>
</Authorization>
</Header>
<Body>
  <GetDetailed_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Estimates_1"
  companyId="MSFT.O"
  companyIdType="RIC"
  lang="en-US"
  UsePrimaryEarningsTypeOnly="false"
  UsePrimaryConsensusTypeOnly="false"
  UsePrimaryEstimateTypeOnly="false"
  UsePrimaryPeriodicityTypeOnly="false"
  HistoricalTrendOnly="3MonthTrend"
  RealTime="false"
  Periodicity="PeriodicAll"
  ShowReferenceInformation="false"
  ShowSecurityInformation="false"
  ShowMetaInformation="false"
  ShowBrokerCoverageInformation="false"
  ShowActualInformation="false"
  ShowSurpriseInformation="false"
  HidePeriodic="false"
  HideNonPeriodic="false"
  HideRecommendation="false"
  Category="Default"
  TransactionID="" />
</Body>
</Envelope>

```

For more details on elements the request contains see section Understanding Reuters Estimates Request.

16.6 Understanding Thomson Reuters Estimates Responses

The following is an example of Thomson Reuters Estimates Response:

XML Sample Response - Reuters Estimates Response Overview

```

<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    ...
  </s:Header>
  <s:Body>
    <GetConsensus_Response_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Estimates_1">
      <ReferenceInformation xmlns="http://schemas.reuters.com/ns/2008/01/12/webservices/rkd/CEDRefinfo_1"
      Major="1" Minor="0" Revision="0">
        <RepNo>4741N</RepNo>
        <Production Date="2008-01-26T21:59:55" />
        <CompanyInformation>
          <CompanyXrefs>
            <CompanyXref Type="IRSNo">130871985</CompanyXref>
            <CompanyXref Type="CIKNo">0000051143</CompanyXref>
            <CompanyXref Type="FProXRef">100002523</CompanyXref>
            <CompanyXref Type="OrgID">18228</CompanyXref>
            <CompanyName Type="Primary">International Business Machines Corp.</CompanyName>
          </CompanyXrefs>
          <CompanyStatus>
            <Status Type="ActiveStatus">true</Status>
            <Status Type="CurrentEstimates">true</Status>
            <Company Type="EQU" />
            <AvailableInfo Type="BusinessIntelligence">true</AvailableInfo>
            <AvailableInfo Type="Financials">true</AvailableInfo>
            <AvailableInfo Type="Estimates">true</AvailableInfo>
            <AvailableInfo Type="SignificantDevelopment">true</AvailableInfo>
            <AvailableInfo Type="Officers">true</AvailableInfo>
            <FilingStatus CurrentStatus="Filing" ReasonCode="0" />
          </CompanyStatus>
        </CompanyInformation>
      </ReferenceInformation>
    </GetConsensus_Response_1>
  </s:Body>
</s:Envelope>

```



```

    <HasPublicDebt>false</HasPublicDebt>
  </CompanyStatus>
  <CompanyUpdates>
    <LastModified Type="Financials">2008-01-24T18:44:27</LastModified>
    <LastModified Type="Other">2008-01-25T10:22:02</LastModified>
    <LatestInformation Type="AnnualFinancials">2007-12-31</LatestInformation>
    <LatestInformation Type="InterimFinancials">2007-12-31</LatestInformation>
  </CompanyUpdates>
  <Currencies>
    <Currency Type="FinancialStatements">USD</Currency>
    <Currency Type="Estimates">USD</Currency>
    <Currency Type="PrimaryIssuePrice">USD</Currency>
  </Currencies>
  <IndustryClassification>
    <Taxonomy Type="RBSS2004">
      <Detail Order="1" Code="57211" Description="IT Services & Consulting" />
    </Taxonomy>
    <Taxonomy Type="NAICS1997">
      <Detail Order="1" Code="541611" Description="Administrative Management and General Management Consulting Services" />
    </Taxonomy>
    ...
    <Taxonomy Type="MGINDUSTRY">
      <Detail Order="1" Code="0909" Mnemonic="SVSBUS" Description="Business Services" />
    </Taxonomy>
  </IndustryClassification>
</CompanyInformation>
<IssueInformation>
  <Issue ID="1" Type="C" Order="1">
    <IssueXrefs>
      <IssueXref Type="Name">Common Stock</IssueXref>
      <IssueXref Type="Ticker">IBM</IssueXref>
      <IssueXref Type="RIC">IBM</IssueXref>
      <IssueXref Type="DisplayRIC">IBM.N</IssueXref>
    </IssueXrefs>
    <IssueStatus>
      <IssueType>Common Stock</IssueType>
      <Status Type="ActiveStatus">true</Status>
      <Status Type="PublicStatus">true</Status>
      <Status Type="ExpectedIPO">false</Status>
    </IssueStatus>
    <IssueSpecifics>
      <Exchange Code="NYSE" Country="USA" Region="NA">New York Stock Exchange</Exchange>
      <ListingType>OSR</ListingType>
      <MostRecentSplit Date="1999-05-27">2.0</MostRecentSplit>
      <SplitHistory>
        <Split Date="1999-05-27">2.0</Split>
        <Split Date="1997-05-28">2.0</Split>
      </SplitHistory>
    </IssueSpecifics>
  </Issue>
  <Issue ID="2" Type="P" Order="1">
    <IssueXrefs>
      <IssueXref Type="Name">Preferred Stock- 7.5%</IssueXref>
    </IssueXrefs>
    <IssueStatus>
      <IssueType>Preferred Stock</IssueType>
      <Status Type="ActiveStatus">true</Status>
      <Status Type="PublicStatus">false</Status>
      <Status Type="ExpectedIPO">false</Status>
    </IssueStatus>
    <IssueSpecifics>
      <Exchange Code="NYSE" Country="USA" Region="NA">New York Stock Exchange</Exchange>
    </IssueSpecifics>
  </Issue>
</IssueInformation>
</ReferenceInformation>
<EstimatesSecurityInformation xmlns="http://schemas.reuters.com/ns/2008/01/12/webservices/rkd/
EstimatesSecurityAPI_1" Major="1" Minor="0" Revision="0">
  <RepNo>4741N</RepNo>
  <CompanyName Type="Primary">International Business Machines Corp.</CompanyName>
  <Production Date="2007-06-06T13:30:49" />
  <SecurityInfo>
    <Security code="1">
      <Exchange code="NYSE">New York Stock Exchange</Exchange>

```



```

<Country code="USA" set="MX">United States</Country>
<SecIds><SecId set="LOCAL" type="RIC">IBM</SecId>
  <SecId set="LOCAL" type="Display RIC">IBM.N</SecId>
  <SecId set="LOCAL" type="TICKER">IBM</SecId>
</SecIds>
<MarketData>
  <MarketDataItem updated="2005-10-10T00:00:00" currCode="USD" unit="U" type="CLPRICE">81.250000</MarketDataItem>
  <MarketDataItem currCode="USD" unit="U" type="SHARESOUT">1484827275</MarketDataItem>
  <MarketDataItem currCode="USD" unit="M" type="MARKETCAP">120642.2161</MarketDataItem>
  <MarketDataItem updated="2005-01-03T00:00:00" currCode="USD" unit="U" type="52WKHIGH">99.1000</MarketDataItem>
  <MarketDataItem updated="2005-04-20T00:00:00" currCode="USD" unit="U" type="52WKLOW">71.8500</MarketDataItem>
  <MarketDataItem currCode="USD" unit="N" type="EV_Cur">171595.10000</MarketDataItem>
  <MarketDataItem currCode="USD" unit="N" type="BETA">1.62492</MarketDataItem>
  <MarketDataItem currCode="USD" unit="N" type="VOL3MAVG">162.83565</MarketDataItem>
</MarketData>
<LastSplit splitDate="1999-05-27T00:00:00">2.0000</LastSplit>
</Security>
</SecurityInfo>
</EstimatesSecurityInformation>
<EstimatesMetaInformation xmlns="http://schemas.reuters.com/ns/2008/01/12/webservices/rkd/EstimatesMetaAPI_1" Major="1" Minor="0" Revision="0">
  <RepNo>4741N</RepNo>
  <CompanyName Type="Primary">International Business Machines Corp.</CompanyName>
  <Production Date="2007-06-06T13:30:49" />
  <CompanyInfo>
    <Primary type="Earnings">PRX</Primary>
    <Primary type="Consensus">Mean</Primary>
    <Primary type="Estimate">EPS</Primary>
    <Primary type="Periodicity">Q</Primary>
    <Primary type="General Note">ACCOUNTING: Consensus includes stock-based compensation.</Primary>
    <Currency code="USD" type="CONSENSUS" set="ISO">U.S. Dollars</Currency>
    <CurFiscalPeriod periodNum="2" periodType="Q" fyem="12" fYear="2007" />
    <CompanyPeriods>
      <Annual fyNum="-5" fYear="2001" sYear="PRVS6" endMonth="12" periodUnit="MNS" periodLength="12">
        <Interim type="Q" periodNum="1" endMonth="3" endCalYear="2001" periodUnit="MNS" periodLength="3" />
        <Interim type="Q" periodNum="2" endMonth="6" endCalYear="2001" periodUnit="MNS" periodLength="3" />
        <Interim type="Q" periodNum="3" endMonth="9" endCalYear="2001" periodUnit="MNS" periodLength="3" />
        <Interim type="Q" periodNum="4" endMonth="12" endCalYear="2001" periodUnit="MNS" periodLength="3" />
      </Annual>
      ...
    </CompanyPeriods>
  </CompanyInfo>
  <MetaCategory catname="ActTypes">
    <MetaItem>
      <MetaValue mvalue="FY" mname="periodtype" />
      <MetaValue mvalue="BVPS" mname="type" />
      <MetaValue mvalue="2006" mname="fyear" />
    </MetaItem>
    ...
    <MetaItem>
      <MetaValue mvalue="NP" mname="periodtype" />
      <MetaValue mvalue="SUPOPINION" mname="type" />
    </MetaItem>
  </MetaCategory>
</EstimatesMetaInformation>
<EstimatesBrokerCoverageInformation xmlns="http://schemas.reuters.com/ns/2008/01/12/webservices/rkd/EstimatesBrokerCoverageAPI_1" Major="1" Minor="0" Revision="0">
  <RepNo>4741N</RepNo>
  <CompanyName Type="Primary">International Business Machines Corp.</CompanyName>
  <Production Date="2007-06-06T13:30:49" />
  <Coverage>
    <Broker brokerName="Merrill Lynch" brokerId="US_2">
      <Teams>
        <Team teamId="US_303859">
          <Analyst analystId="3GRP">Richard Farmer</Analyst>
        </Team>
      </Teams>
    </Broker>
    ...
  </Coverage>
</EstimatesBrokerCoverageInformation>
<EstimatesConsensusInformation xmlns="http://schemas.reuters.com/ns/2008/01/12/webservices/rkd/

```



```

EstimatesConsensusAPI_1" Major="1" Minor="0" Revision="0">
<RepNo>4741N</RepNo>
<CompanyName Type="Primary">International Business Machines Corp.</CompanyName>
<Production Date="2007-06-06T13:30:49" />
<ConsEstimates>
  <FYEstimates>
    <FYEstimate unit="U" type="BVPS">
      <FYPeriod endMonth="12" endCalYear="2005" periodType="A" fYear="2005">
        <ConsEstimate type="High">
          <ConsValue dateType="CURR">20.7500</ConsValue>
        </ConsEstimate>
        <ConsEstimate type="Low">
          <ConsValue dateType="CURR">19.0000</ConsValue>
        </ConsEstimate>
        <ConsEstimate type="Mean">
          <ConsValue dateType="CURR">19.9667</ConsValue>
        </ConsEstimate>
        <ConsEstimate type="StdDev">
          <ConsValue dateType="CURR">0.7261</ConsValue>
        </ConsEstimate>
        <ConsEstimate type="NumOfEst">
          <ConsValue dateType="CURR">3</ConsValue>
        </ConsEstimate>
        <ConsEstimate type="Median">
          <ConsValue dateType="CURR">20.1500</ConsValue>
        </ConsEstimate>
      </FYPeriod>
    ...
  </FYEstimate>
</FYEstimates>
<NPEstimates>
  <NPEstimate unit="P" type="LTGROWTH">
    <ConsEstimate type="High">
      <ConsValue dateType="CURR">15.0000</ConsValue>
    </ConsEstimate>
    <ConsEstimate type="Low">
      <ConsValue dateType="CURR">8.0000</ConsValue>
    </ConsEstimate>
    <ConsEstimate type="Mean">
      <ConsValue dateType="CURR">10.5100</ConsValue>
    </ConsEstimate>
    <ConsEstimate type="StdDev">
      <ConsValue dateType="CURR">1.6617</ConsValue>
    </ConsEstimate>
    <ConsEstimate type="NumOfEst">
      <ConsValue dateType="CURR">12</ConsValue>
    </ConsEstimate>
    <ConsEstimate type="Median">
      <ConsValue dateType="CURR">10.0000</ConsValue>
    </ConsEstimate>
  </NPEstimate>
  ...
</NPEstimates>
<Recommendations>
  <STOpinion>
    <ConsOpinion desc="BUY" code="1" set="STD">
      <ConsOpValue unit="N" type="NumOfEst">
        <ConsValue dateType="CURR">8</ConsValue>
      </ConsOpValue>
    </ConsOpinion>
    <ConsOpinion desc="OUTPERFORM" code="2" set="STD">
      <ConsOpValue unit="N" type="NumOfEst">
        <ConsValue dateType="CURR">8</ConsValue>
      </ConsOpValue>
    </ConsOpinion>
    <ConsOpinion desc="HOLD" code="3" set="STD">
      <ConsOpValue unit="N" type="NumOfEst">
        <ConsValue dateType="CURR">6</ConsValue>
      </ConsOpValue>
    </ConsOpinion>
  </STOpinion>
</Recommendations>
</ConsEstimates>
</EstimatesConsensusInformation>
<EstimatesDetailedInformation xmlns="http://schemas.reuters.com/ns/2008/01/12/webservices/rkd/
EstimatesDetailedAPI_1" Major="1" Minor="0" Revision="0">

```



```

<RepNo>4741N</RepNo>
<CompanyName Type="Primary">International Business Machines Corp.</CompanyName>
<Production Date="2007-06-06T13:30:49" />
<DetEstimates>
  <FYEstimates>
    <FYEstimate unit="U" type="BVPS">
      <FYPeriod endMonth="12" endCalYear="2005" periodType="A" fYear="2005">
        <DetEstimate teamId="US_" brokerId="US_67">
          <EstValue suppr="false" expir="2006-09-19T09:28:00" confirm="2006-01-13T14:45:27" orig="2006-01-13T14:45:27" dateType="CURR">20.1500</EstValue>
        </DetEstimate>
        <DetEstimate teamId="US_384539" brokerId="US_4589">
          <EstValue suppr="false" confirm="2005-10-28T14:30:00" orig="2005-10-28T14:30:00" dateType="CURR">20.7500</EstValue>
        </DetEstimate>
        <DetEstimate teamId="US_201373" brokerId="US_11581">
          <EstValue suppr="false" confirm="2005-10-18T15:30:00" orig="2005-10-18T15:30:00" dateType="CURR">19.0000</EstValue>
        </DetEstimate>
      </FYPeriod>
      <FYPeriod endMonth="12" endCalYear="2006" periodType="A" fYear="2006">
        <DetEstimate teamId="US_384539" brokerId="US_4589">
          <EstValue suppr="false" confirm="2006-11-06T18:14:03" orig="2006-11-06T18:14:03" dateType="CURR">23.1200</EstValue>
        </DetEstimate>
        <DetEstimate teamId="US_194815" brokerId="US_9211">
          <EstValue suppr="false" confirm="2006-10-18T11:28:59" orig="2006-10-18T11:28:59" dateType="CURR">22.5400</EstValue>
        </DetEstimate>
      </FYPeriod>
    </FYEstimates>
  </FYEstimates>
  <NPEstimates>
    <NPEstimate unit="P" type="LTGROWTH">
      <DetEstimate teamId="US_303859" brokerId="US_2">
        <EstValue suppr="false" confirm="2007-05-11T22:26:04" orig="2002-01-28T21:01:00" dateType="CURR">10.0000</EstValue>
      </DetEstimate>
      <DetEstimate teamId="US_155877" brokerId="US_27">
        <EstValue suppr="false" confirm="2007-02-07T11:22:18" orig="2003-11-18T23:43:00" dateType="CURR">11.0000</EstValue>
      </DetEstimate>
      <DetEstimate teamId="US_397588" brokerId="US_85">
        <EstValue suppr="false" confirm="2007-04-18T13:55:21" orig="2006-11-06T19:08:03" dateType="CURR">9.0000</EstValue>
      </DetEstimate>
    </NPEstimates>
  </NPEstimates>
  <Recommendations>
    <STOpinion>
      <DetOpinion teamId="US_303859" brokerId="US_2">
        <OpinionValue suppr="false" confirm="2007-05-11T22:26:04" orig="2006-10-18T05:00:34" dateType="CURR">
          <OpCode code="3" set="STD">HOLD</OpCode>
          <OpCode code="2" set="BKR">NEUTRAL</OpCode>
        </OpinionValue>
      </DetOpinion>
      <DetOpinion teamId="US_155877" brokerId="US_27">
        <OpinionValue suppr="false" confirm="2007-02-07T11:22:18" orig="2005-04-29T14:22:40" dateType="CURR">
          <OpCode code="1" set="STD">BUY</OpCode>
          <OpCode code="B" set="BKR">BUY</OpCode>
        </OpinionValue>
      </DetOpinion>
    </STOpinion>
    <SupOpinion>
      <DetOpinion teamId="US_303859" brokerId="US_2">
        <OpinionValue confirm="2007-04-24T14:30:00" orig="2004-09-15T19:12:35" dateType="CURR">
          <OpCode code="B" set="BKR">Medium</OpCode>
        </OpinionValue>
      </DetOpinion>
    </SupOpinion>
  </Recommendations>

```



```

    </Recommendations>
  </DetEstimates>
  </EstimatesDetailedInformation>
  </GetConsensus_Response_1>
</Body>
</Envelope>

```

The response elements for Reuters Estimates requests contain the following sections:

1. Reference Information
2. Security Information
3. Meta Information
4. Broker Coverage Information
5. Consensus Information
6. Detailed Information

Below you can find elements that are common for all sections:

Attribute	Description
RepNo	Report No.
CompanyName	Primary Company Name.
Production Date	Date and time for when the information was last generated.

16.6.1 Reference Information Section

The following format is an example of specifying the Reference Information section in analysis data for a company:

XML Sample Response - Reference Information Section

```

<ReferenceInformation xmlns="http://schemas.reuters.com/ns/2008/01/12/webservices/rkd/CEDRefinfo_1"
Major="1" Minor="0" Revision="0">
  <RepNo>4741N</RepNo>
  <Production Date="2008-01-26T21:59:55" />
  <CompanyInformation>
    <CompanyXrefs>
      <CompanyXref Type="IRSNo">130871985</CompanyXref>
      <CompanyXref Type="CIKNo">0000051143</CompanyXref>
      <CompanyXref Type="FProXRef">100002523</CompanyXref>
      <CompanyXref Type="OrgID">18228</CompanyXref>
      <CompanyName Type="Primary">International Business Machines Corp.</CompanyName>
    </CompanyXrefs>
    <CompanyStatus>
      <Status Type="ActiveStatus">true</Status>
      <Status Type="CurrentEstimates">true</Status>
      <Company Type="EQU" />
      <AvailableInfo Type="BusinessIntelligence">true</AvailableInfo>
      <AvailableInfo Type="Financials">true</AvailableInfo>
      <AvailableInfo Type="Estimates">true</AvailableInfo>
      <AvailableInfo Type="SignificantDevelopment">true</AvailableInfo>
      <AvailableInfo Type="Officers">true</AvailableInfo>
      <FilingStatus CurrentStatus="Filing" ReasonCode="0" />
      <HasPublicDebt>>false</HasPublicDebt>
    </CompanyStatus>
    <CompanyUpdates>
      <LastModified Type="Financials">2008-01-24T18:44:27</LastModified>
      <LastModified Type="Other">2008-01-25T10:22:02</LastModified>
      <LatestInformation Type="AnnualFinancials">2007-12-31</LatestInformation>
      <LatestInformation Type="InterimFinancials">2007-12-31</LatestInformation>
    </CompanyUpdates>
    <Currencies>
      <Currency Type="FinancialStatements">USD</Currency>
      <Currency Type="Estimates">USD</Currency>
      <Currency Type="PrimaryIssuePrice">USD</Currency>
    </Currencies>
  </CompanyInformation>
</ReferenceInformation>

```



```

</Currencies>
<IndustryClassification>
  <Taxonomy Type="RBSS2004">
    <Detail Order="1" Code="57211" Description="IT Services & Consulting" />
  </Taxonomy>
  <Taxonomy Type="NAICS1997">
    <Detail Order="1" Code="541611" Description="Administrative Management and General Management Consulting
    Services" />
  </Taxonomy>
  ...
  <Taxonomy Type="MGINDUSTRY">
    <Detail Order="1" Code="0909" Mnemonic="SVSBUS" Description="Business Services" />
  </Taxonomy>
</IndustryClassification>
</CompanyInformation>
<IssueInformation>
  <Issue ID="1" Type="C" Order="1">
    <IssueXrefs>
      <IssueXref Type="Name">Common Stock</IssueXref>
      <IssueXref Type="Ticker">IBM</IssueXref>
      <IssueXref Type="RIC">IBM</IssueXref>
      <IssueXref Type="DisplayRIC">IBM.N</IssueXref>
    </IssueXrefs>
    <IssueStatus>
      <IssueType>Common Stock</IssueType>
      <Status Type="ActiveStatus">true</Status>
      <Status Type="PublicStatus">true</Status>
      <Status Type="ExpectedIPO">false</Status>
    </IssueStatus>
    <IssueSpecifics>
      <Exchange Code="NYSE" Country="USA" Region="NA">New York Stock Exchange</Exchange>
      <ListingType>OSR</ListingType>
      <MostRecentSplit Date="1999-05-27">2.0</MostRecentSplit>
      <SplitHistory>
        <Split Date="1999-05-27">2.0</Split>
        <Split Date="1997-05-28">2.0</Split>
      </SplitHistory>
    </IssueSpecifics>
  </Issue>
  <Issue ID="2" Type="P" Order="1">
    <IssueXrefs>
      <IssueXref Type="Name">Preferred Stock- 7.5%</IssueXref>
    </IssueXrefs>
    <IssueStatus>
      <IssueType>Preferred Stock</IssueType>
      <Status Type="ActiveStatus">true</Status>
      <Status Type="PublicStatus">false</Status>
      <Status Type="ExpectedIPO">false</Status>
    </IssueStatus>
    <IssueSpecifics>
      <Exchange Code="NYSE" Country="USA" Region="NA">New York Stock Exchange</Exchange>
    </IssueSpecifics>
  </Issue>
</IssueInformation>
</ReferenceInformation>

```

For more information on CompanyInformation see section Company Information.

For more information on IssueInformation see section Issue Information.

16.6.1.1 Company Information

The following format is an example of company information contained in the Reference Information section in analysis data for a company:

XML Sample Response - Company Information

```
<CompanyInformation>
```




```

<CompanyXrefs>
  <CompanyXref Type="IRSNo">130871985</CompanyXref>
  <CompanyXref Type="CIKNo">0000051143</CompanyXref>
  <CompanyXref Type="FProXRef">100002523</CompanyXref>
  <CompanyXref Type="OrgID">18228</CompanyXref>
  <CompanyName Type="Primary">International Business Machines Corp.</CompanyName>
</CompanyXrefs>
<CompanyStatus>
  <Status Type="ActiveStatus">true</Status>
  <Status Type="CurrentEstimates">true</Status>
  <Company Type="EQU" />
  <AvailableInfo Type="BusinessIntelligence">true</AvailableInfo>
  <AvailableInfo Type="Financials">true</AvailableInfo>
  <AvailableInfo Type="Estimates">true</AvailableInfo>
  <AvailableInfo Type="SignificantDevelopment">true</AvailableInfo>
  <AvailableInfo Type="Officers">true</AvailableInfo>
  <FilingStatus CurrentStatus="Filing" ReasonCode="0" />
  <HasPublicDebt>false</HasPublicDebt>
</CompanyStatus>
<CompanyUpdates>
  <LastModified Type="Financials">2008-01-24T18:44:27</LastModified>
  <LastModified Type="Other">2008-01-25T10:22:02</LastModified>
  <LatestInformation Type="AnnualFinancials">2007-12-31</LatestInformation>
  <LatestInformation Type="InterimFinancials">2007-12-31</LatestInformation>
</CompanyUpdates>
<Currencies>
  <Currency Type="FinancialStatements">USD</Currency>
  <Currency Type="Estimates">USD</Currency>
  <Currency Type="PrimaryIssuePrice">USD</Currency>
</Currencies>
<IndustryClassification>
  <Taxonomy Type="RBSS2004">
    <Detail Order="1" Code="57211" Description="IT Services & Consulting" />
  </Taxonomy>
  <Taxonomy Type="NAICS1997">
    <Detail Order="1" Code="541611" Description="Administrative Management and General Management Consulting Services" />
  </Taxonomy>
  ...
  <Taxonomy Type="MGINDUSTRY">
    <Detail Order="1" Code="0909" Mnemonic="SVSBUS" Description="Business Services" />
  </Taxonomy>
</IndustryClassification>
</CompanyInformation>

```

Attribute	Description
CompanyXrefs	Company Reference Information.
CompanyXref Type	Type of reference. Contains the following attribute(s): • FProXRef - • orgID - organization ID
CompanyName Type	Type of company Name. Contains the following attribute(s): • Primary - primary company name
Company Status	Company Status.
Status Type	Lists all company statuses. Contains the following attribute(s): • Active Status • Current Estimates
Company Type	Company type.
AvailableInfo Type	Types of available information. Contains the following attribute(s): • BusinessIntelligence: can contain the following values:1.



	• Financials: can contain the following values: 1. • Estimates: can contain the following values: 1. • SignificantDevelopment: can contain the following values:1. • Officers: can contain the following values: 1.
FilingStatus	Filing status. Contains the following attribute(s): • CurrentStatus: can contain the following value(s): • Filing
HasPublicDebt	Has Public Debt. The possible values are: • 0 -
Company Updates	Information on last company updates.
LastModifiedType	Type of information modified last time. Contains the following attribute(s): • Financials - date when financials were modified last time. • Other - date when other information was modified last time.
LatestInformationType	Type of information received latest Contains the following attribute(s): • AnnualFinancials - date when annual financials were modified last time. • InterimFinancials - date when interim financials were modified last time.
Currencies	Currency description.
Currency Type	Type of currency used. Contains the following attribute(s): • FinancialStatements - currency used for Financial Statements. • Estimates - currency used for Estimates. • PrimaryIssuePrice - currency used for primary Issue price.
RelatedCompanies	Related Companies. Contains the following attribute(s): • CompanyType: Primary Measure (where applicable) • RepNo: Report Number • Primary: • Relationship
IndustryClassification	Industry Classification.
TaxonomyType	Taxonomy Type. Contains the following attribute(s): • Detail Order: • Code: • Description: • Mnemonic:

16.6.1.2 Issue Information

The following format is an example of issue information contained in the Reference Information section in analysis data for a company:

XML Sample Response - Issue Information

```
<IssueInformation>
  <Issue ID="1" Type="C" Order="1">
```



```

<IssueXrefs>
  <IssueXref Type="Name">Common Stock</IssueXref>
  <IssueXref Type="Ticker">IBM</IssueXref>
  <IssueXref Type="RIC">IBM</IssueXref>
  <IssueXref Type="DisplayRIC">IBM.N</IssueXref>
</IssueXrefs>
<IssueStatus>
  <IssueType>Common Stock</IssueType>
  <Status Type="ActiveStatus">true</Status>
  <Status Type="PublicStatus">true</Status>
  <Status Type="ExpectedIPO">false</Status>
</IssueStatus>
<IssueSpecifics>
  <Exchange Code="NYSE" Country="USA" Region="NA">New York Stock Exchange</Exchange>
  <ListingType>OSR</ListingType>
  <MostRecentSplit Date="1999-05-27">2.0</MostRecentSplit>
  <SplitHistory>
    <Split Date="1999-05-27">2.0</Split>
    <Split Date="1997-05-28">2.0</Split>
  </SplitHistory>
</IssueSpecifics>
</Issue>
<Issue ID="2" Type="P" Order="1">
  <IssueXrefs>
    <IssueXref Type="Name">Preferred Stock- 7.5%</IssueXref>
  </IssueXrefs>
  <IssueStatus>
    <IssueType>Preferred Stock</IssueType>
    <Status Type="ActiveStatus">true</Status>
    <Status Type="PublicStatus">false</Status>
    <Status Type="ExpectedIPO">false</Status>
  </IssueStatus>
  <IssueSpecifics>
    <Exchange Code="NYSE" Country="USA" Region="NA">New York Stock Exchange</Exchange>
  </IssueSpecifics>
</Issue>
</IssueInformation>

```

Attribute	Description
Issue ID	Issue ID.
Type	Type of Issue.
Order	Order.
IssueXrefs	Issue reference information. Contains the following attribute(s): • Type: type of information, can contain the following values: • Name • Ticker • RIC • DisplayRIC
IssueStatus	Issue status. Contains the following attribute(s): • Issue Type: type of Issue • Status Type: can contain the following values: • ActiveStatus • PublicStatus • ExpectedIPO
IssueSpecifics	Issue specifics.
Exchange Code	Exchange Code (example: "NYSE").
Country	Country name (example: "USA").
Region	Region name (example: "NA").
ListingType	Listing Type (example: "OSR").
MostRecentSplit Date	Most recent date when split occurred.



SplitHistory	Shows history of all splits.

16.6.2 Security Information Section

The following is an example of Security Information Section in the Thomson Reuters Estimates Response:

XML Sample Response - Estimates Security Information Section	
<pre> <GetSecurityInformation_Response_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Estimates_1"> <EstimatesSecurityInformation xmlns="http://schemas.reuters.com/ns/2008/01/12/webservices/rkd/EstimatesSecurityAPI_1" Major="1" Minor="0" Revision="0"> <RepNo>4741N</RepNo> <CompanyName Type="Primary">International Business Machines Corp.</CompanyName> <Production Date="2007-06-06T13:30:49" /> <SecurityInfo> <Security code="1"> <Exchange code="NYSE">New York Stock Exchange</Exchange> <Country code="USA" set="MX">United States</Country> <SecIds> <SecId set="LOCAL" type="RIC">IBM</SecId> <SecId set="LOCAL" type="Display RIC">IBM.N</SecId> <SecId set="LOCAL" type="TICKER">IBM</SecId> </SecIds> <MarketData> <MarketDataItem updated="2005-10-10T00:00:00" currCode="USD" unit="U" type="CLPRICE">81.250000</MarketDataItem> <MarketDataItem currCode="USD" unit="U" type="SHARESOUT">1484827275</MarketDataItem> <MarketDataItem currCode="USD" unit="M" type="MARKETCAP">120642.2161</MarketDataItem> <MarketDataItem updated="2005-01-03T00:00:00" currCode="USD" unit="U" type="52WKHIGH">99.1000</MarketDataItem> <MarketDataItem updated="2005-04-20T00:00:00" currCode="USD" unit="U" type="52WKLOW">71.8500</MarketDataItem> <MarketDataItem currCode="USD" unit="N" type="EV_Cur">171595.10000</MarketDataItem> <MarketDataItem currCode="USD" unit="N" type="BETA">1.62492</MarketDataItem> <MarketDataItem currCode="USD" unit="N" type="VOL3MAVG">162.83565</MarketDataItem> </MarketData> <LastSplit splitDate="1999-05-27T00:00:00">2.0000</LastSplit> </Security> </SecurityInfo> </EstimatesSecurityInformation> </GetSecurityInformation_Response_1> </pre>	
</Body>	
</Envelope>	

Attribute	Description
Security Code	Security Code ("1" = primary issue).
Exchange Code	Exchange (example: "NYSE").
Country	Country name (example: Great Britain). Contains the following attribute(s): Set: can contain the following values: - MX - Multex Country Set (for North American companies). - GE - Global Estimates Country Set (for non-NorthAm countries). Code: Country Code (example: USA).
SecIds	Contains one or multiple SecurityID.
MarketData	Markert Data Section may contain multiple MarketDataItems.
MarketDataItem	Market Data Item. Contains the following attribute(s): type: can contain values : - CLPRICE - Closing Price. - SHARESOUT - Number of Shares Outstanding. This will always be expressed as units (U). - MARKETCAP - Market Cap always expressed in Millions (M) and calculated as CLPRICE (converted to U where unit = MC) * SHARESOUT.



	• 52WKHIGH - 52 week High. • 52WKLOW - 52 Week Low. • unit: can contain the following values: • U - Major Currency Units (x1.00). • T - Major Currency Units (x1.00). • M - Millions ... (x1000000.00). • B - Billions ... (x1000000000.00). • MC - Minor Currency Units (x0.01). • currcode: Currency Code (Not applicable where type = SHARESOUT). (example:USD). • Updated: Date of the close price. Only provided where type = CLPRICE (example: "2001-05-16T00:00:00").
LastSplit	The last split factor. Contains the following attribute(s): • splitDate: Date & Time when the split occurred.

16.6.3 META Information Section

The following format is an example of specifying the Meta Information section in analysis data for a company:

XML Sample Response - Estimates Meta Information Section	
<pre> <GetMetaInformation_Response_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Estimates_1"> <EstimatesMetaInformation xmlns="http://schemas.reuters.com/ns/2008/01/12/webservices/rkd/EstimatesMetaAPI_1" Major="1" Minor="0" Revision="0"> <RepNo>4741N</RepNo> <CompanyName Type="Primary">International Business Machines Corp.</CompanyName> <Production Date="2007-06-06T13:30:49" /> <CompanyInfo> <Primary type="Earnings">PRX</Primary> <Primary type="Consensus">Mean</Primary> <Primary type="Estimate">EPS</Primary> <Primary type="Periodicity">Q</Primary> <Primary type="General Note">ACCOUNTING: Consensus includes stock-based compensation.</Primary> <Currency code="USD" type="CONSENSUS" set="ISO">U.S. Dollars</Currency> <CurFiscalPeriod periodNum="2" periodType="Q" fyem="12" fYear="2007" /> <CompanyPeriods> <Annual fyNum="-5" fYear="2001" sYear="PRVS6" endMonth="12" periodUnit="MNS" periodLength="12"> <Interim type="Q" periodNum="1" endMonth="3" endCalYear="2001" periodUnit="MNS" periodLength="3" /> <Interim type="Q" periodNum="2" endMonth="6" endCalYear="2001" periodUnit="MNS" periodLength="3" /> <Interim type="Q" periodNum="3" endMonth="9" endCalYear="2001" periodUnit="MNS" periodLength="3" /> <Interim type="Q" periodNum="4" endMonth="12" endCalYear="2001" periodUnit="MNS" periodLength="3" /> </Annual> ... </CompanyPeriods> </CompanyInfo> <MetaCategory catname="ActTypes"> <MetaItem> <MetaValue mvalue="FY" mname="periodtype" /> <MetaValue mvalue="BVPS" mname="type" /> <MetaValue mvalue="2006" mname="fyear" /> </MetaItem> ... <MetaItem> <MetaValue mvalue="NP" mname="periodtype" /> <MetaValue mvalue="SUPOPINION" mname="type" /> </MetaItem> </MetaCategory> </EstimatesMetaInformation> </GetMetaInformation_Response_1> </pre>	

Attribute	Description
CompanyInfo	Company Info.



Primary	Primary Measure (where applicable).
Currency	Currency description (example: "U.S. Dollars"). Contains the following attribute(s): • Set: Currency Set • Type: Currency Type • Code: Currency Code
CurFiscalPeriod	Current Fiscal Period. Contains the following attribute(s): • fyear: Current Fiscal Year. • fyem: Current Fiscal Year's End Month. • periodType: Current Fiscal Period's Type. • A - Annual • Q - Quarterly • S - Semi-annual • T - Trimester (Reserved for future use) • M - Monthly (Reserved for future use) • periodNum: Current Fiscal Period's Number (not provided for Annual period). Can contain values (1,2,3,4,5-12).
Company Periods	Company Periods.
Annual	Annual Period. Contains the following attribute(s): • periodNum: Annual Period Number. Possible values are: -5,-4,-3,-2,-1, 0,1,2,3,4,5. • fYear: Current Fiscal Year. • endMonth: Period End Month. • periodUnit: Determines what the period is made up of. Can have the following values: • M - Month • W - Week • periodLength: Number of units in the period. • expectDate: Date & Time of excepted announcement date. (example: "2005-08-29T00:00:00"). • dateStatus: Confirmed (C) or Tentative (T). • marketPhase: can have the following values: 1 (Before Market Opens), 2 (During Market Open) or 3 (After Market Close).
Interim	Interim. Contains the following attribute(s): • type: Interim type. Can have the following values: • Q - Quarter • S - Semi-annual • T - Trimester (Reserved for future use) • M - Monthly (Reserved for future use) • periodNum: Fiscal Period's Number. • endMonth: Period End Month. • endCalyear: The Calendar for the current period. • periodUnit: Determines what the period is made up of. Can have the following values: • MNS - Months • WKS - Weeks • periodLength: Number of units in the period. • ExpectedDate: Date & Time of excepted announcement date. (example: "2005-08-29T00:00:00"). • dateStatus: Confirmed (C) or Tentative (T). • marketPhase: can have the following values: 1 (Before Market Opens), 2 (During Market Open) or 3 (After Market Close).
MetaCategory	Meta Information Category. Contains the following Attribute(s): • Type • EstTypes - Estimate Type Category. • ActTypes - Actual Type Category.
MetaItem	Meta Information Item.
MetaValue	Meta Information Value.



Contains the following Attribute(s):

- **mname:** Meta Value Name
 - type - Estimate/Actual Type
 - periodtype - Period Type (for periodic estimates/actuals)
 - fyear - Fiscal Year (for the FY estimates)

 - **mvalue:** Meta Value.
- If mname="type" then mvalue can have the following values:
- EPS - EPS based on earnings pre exceptional and post goodwill.
 - FFO - North American companies only.
 - REVENUE - Revenue
 - DPS - Dividends Per Share based on earnings pre exceptional and post goodwill.
 - NAV - NAV
 - NPROFIT - Net Profit based on earnings pre exceptional and post goodwill.
 - OPROFIT - Operating Profit
 - PPROFIT - Pre-tax Profit based on earnings pre exceptional and post goodwill.
 - RPROFIT - Recurring Profit
 - CPS - Cash Flow Per Share
 - EBITDA - EBITDA
 - EBIT - EBITA
 - EPSREP - EPS reported or GAAP basis.
 - EPSEBG - EPS based on earnings pre goodwill and pre exceptional
 - NPROFITREP - Net Profit reported or GAAP basis
 - NPROFITEBG - Net Profit based on earnings pre goodwill and pre exceptional
 - PPROFITREP - Pre Tax Profit reported or GAAP basis
 - PPROFITEBG - Pre Tax Profit based on earnings pre goodwill and pre exceptional
 - BVPS - Book Value Per Share
 - NDEBT - Net Debt
 - CAPEX - Capital Expenditure
 - SLREVENUE - Software License Revenue
 - ARPU - Average Revenue Per Unit
 - USALES - Unit Sales
 - T1R - Tier 1 Ratio
 - B2BR- Book to Bill Ratio
 - SUBSCRS - Subscribers
 - OUTOILGAS - Output, Oil and Gas
 - ROA - Return on Assets
 - ROE - Return on Equity
 - LTGROWTH- Long Term Growth
 - TARGETPRICE - Target Price
 - STOPINION - Short Term Opinion
- If mname="periodtype" then mvalue can have the following values:
- FY - Fiscal Year Estimate
 - NP - Non-periodic Estimate

If mtype="fyear" then mvalue should have the Fiscal Year value.

16.6.4 Broker Coverage Information Section

The following format is an example of specifying the Estimates Broker Coverage Information section in analysis data for a company:

XML Sample Response -Broker Coverage Information Section

```
<GetBrokerCoverageInformation_Response_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Estimates_1">
  <EstimatesBrokerCoverageInformation xmlns="http://schemas.reuters.com/ns/2008/01/12/webservices/rkd/EstimatesBrokerCoverageAPI_1" Major="1" Minor="0" Revision="0">
    <RepNo>4741N</RepNo>
    <CompanyName Type="Primary">International Business Machines Corp.</CompanyName>
```



```

<Production Date="2007-06-06T13:30:49" />
<Coverage>
  <Broker brokerName="Merrill Lynch" brokerId="US_2">
    <Teams>
      <Team teamId="US_303859">
        <Analyst analystId="3GRP">Richard Farmer</Analyst>
      </Team>
    </Teams>
  </Broker>
  ...
</Coverage>
</EstimatesBrokerCoverageInformation>
</GetBrokerCoverageInformation_Response_1>

```

Attribute	Description
Coverage	Coverage information.
Broker	Broker Information. Contains the following Attribute(s): brokerId: Broker ID (example: GL_31). brokerName: Broker Name (example: JP Morgan).
Teams	Teams Section.
Team	Team Info. Contains the following Attribute(s): teamid
Analyst	Analyst. Contains the following Attribute(s): analystid

16.6.5 Consensus Information Section

The following format is an example of specifying the Estimates Consensus Information section in analysis data for a company:

XML Sample Response - Estimates Consensus Information Section

```

<GetConsensus_Response_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Estimates_1">
  <EstimatesConsensusInformation xmlns="http://schemas.reuters.com/ns/2008/01/12/webservices/rkd/EstimatesConsensusAPI_1" Major="1" Minor="0" Revision="0">
    <RepNo>4741N</RepNo>
    <CompanyName Type="Primary">International Business Machines Corp.</CompanyName>
    <Production Date="2007-06-06T13:30:49" />
    <ConsEstimates>
      <FYEstimates>
        <FYEstimate unit="U" type="BVPS">
          <FYPeriod endMonth="12" endCalYear="2005" periodType="A" fYear="2005">
            <ConsEstimate type="High">
              <ConsValue dateType="CURR">20.7500</ConsValue>
            </ConsEstimate>
            <ConsEstimate type="Low">
              <ConsValue dateType="CURR">19.0000</ConsValue>
            </ConsEstimate>
            <ConsEstimate type="Mean">
              <ConsValue dateType="CURR">19.9667</ConsValue>
            </ConsEstimate>
            <ConsEstimate type="StdDev">
              <ConsValue dateType="CURR">0.7261</ConsValue>
            </ConsEstimate>
            <ConsEstimate type="NumOfEst">
              <ConsValue dateType="CURR">3</ConsValue>
            </ConsEstimate>
          </FYPeriod>
        </FYEstimate>
      </FYEstimates>
    </ConsEstimates>
  </EstimatesConsensusInformation>
</GetConsensus_Response_1>

```




```

        <ConsEstimate type="Median">
          <ConsValue dateType="CURR">20.1500</ConsValue>
        </ConsEstimate>
      </FYPeriod>
      ...
    </FYEstimate>
  </FYEstimates>
  <NPEstimates>
    <NPEstimate unit="P" type="LTGROWTH">
      <ConsEstimate type="High">
        <ConsValue dateType="CURR">15.0000</ConsValue>
      </ConsEstimate>
      <ConsEstimate type="Low">
        <ConsValue dateType="CURR">8.0000</ConsValue>
      </ConsEstimate>
      <ConsEstimate type="Mean">
        <ConsValue dateType="CURR">10.5100</ConsValue>
      </ConsEstimate>
      <ConsEstimate type="StdDev">
        <ConsValue dateType="CURR">1.6617</ConsValue>
      </ConsEstimate>
      <ConsEstimate type="NumOfEst">
        <ConsValue dateType="CURR">12</ConsValue>
      </ConsEstimate>
      <ConsEstimate type="Median">
        <ConsValue dateType="CURR">10.0000</ConsValue>
      </ConsEstimate>
    </NPEstimate>
    ...
  </NPEstimates>
  <Recommendations>
    <STOpinion>
      <ConsOpinion desc="BUY" code="1" set="STD">
        <ConsOpValue unit="N" type="NumOfEst">
          <ConsValue dateType="CURR">8</ConsValue>
        </ConsOpValue>
      </ConsOpinion>
      ...
    </STOpinion>
  </Recommendations>
</ConsEstimates>
</EstimatesConsensusInformation>
</GetConsensus_Response_1>

```

Attribute	Description
ConsEstimates	Consensus Estimates Section.
FYEstimates	Fiscal Year Estimates contains multiple FYEstimate items.
FYEstimate	Fiscal Year Estimate. Contains the following attribute(s): • Type: Estimate Type • EPS - EPS based on earnings pre exceptional and post goodwill. • FFO - North American companies only. • REVENUE - Revenue. • DPS - Dividends Per Share based on earnings pre exceptional and post goodwill. • NAV - NAV. • NPROFIT - Net Profit based on earnings pre exceptional and post goodwill. • OPROFIT - Operating Profit. • PPROFIT - Pre-tax Profit based on earnings pre exceptional and post goodwill. • RPROFIT - Recurring Profit. • CPS - Cash Flow Per Share. • EBITDA - EBITDA. • EBIT - EBITA. • EPSREP - EPS reported or GAAP basis. • EPSEBG - EPS based on earnings pre goodwill and pre exceptional. • NPROFITREP - Net Profit reported or GAAP basis. • NPROFITEBG - Net Profit based on earnings pre goodwill and pre exceptional.



	• PPROFITREP - Pre Tax Profit reported or GAAP basis. • PPROFITEBG - Pre Tax Profit based on earnings pre goodwill and pre exceptional. • BVPS - Book Value Per Share. • NDEBT - Net Debt. • CAPEX - Capital Expenditure. • SLREVENUE - Software License Revenue. • ARPU - Average Revenue Per Unit. • USALES - Unit Sales. • T1R - Tier 1 Ratio. • B2BR- Book to Bill Ratio. • SUBSCRS - Subscribers. • OUTOILGAS - Output, Oil and Gas. • ROA - Return on Assets. • ROE - Return on Equity. • Units: Estimate units • U - Major Currency Units (x1.00). • T - Thousands of Major CU (x1000.00). • M - Millions ... (x1000000.00). • B - Billions ... (x1000000000.00). • MC - Minor Currency Units (x0.01). • P - Percent (%).
FYPeriod	Fiscal Year Period. Contains the following attribute(s): • fyear: Fiscal Year • periodType: Fiscal Period's Type. Can have the following values: • A - Annual • Q - Quarterly • S - Semi-annual • T - Trimester (Reserved for future use) • M - Monthly (Reserved for future use) • periodNum: Fiscal Period's Number (not provided for Annual period). Can contain values (1,2,3,4,5-12). • endCalYear: Period End Calendar Year. • endMonth: Period End Month.
ConsEstimate	Consensus Estimate. Contains the following attribute(s): • type: Consensus Estimate Type. Can have the following values: • High - High Estimate. • Low - Low Estimate. • Mean - Mean Estimate (primary consensus measure for North American companies). • Median - Median Estimate (primary consensus measure for non-NorthAm companies). • StdDev - Standard Deviation. • NumOfEst - Number of Estimates. • Upgradings - Number of Estimates upgraded. (Consensus Analysis Only) • Dngradings - Number of Estimates downgraded. (Consensus Analysis Only)
ConsValue	consvalue Contains the following attribute(s): • dateType: Date Type. Can have the following values: • CURR - Current Estimate (applicable for Upgradings or Dngradings). • 1WA - Median / Mean value as of last week. Number of upgrades / downgrades between last week and current estimates (Consensus Analysis Only). • 1MA - Median / Mean value as of last month. Number of upgrades / downgrades between last month and current estimates (Consensus Analysis Only). • 2MA - Median / Mean value as of 2 months ago. Number of upgrades /downgrades between 2 months ago and current estimates (Consensus Analysis Only). • 3MA- Median / Mean value as of 3 months ago. Number of upgrades / downgrades between 3 months ago and current estimates (Consensus Analysis Only). • 4MA - Median / Mean value as of 4months ago (Consensus Analysis Only). • 5MA - Median / Mean value as of 5 months ago (Consensus Analysis Only). • 6MA - Median / Mean value as of 6 months ago (Consensus Analysis Only).



	• 7MA - Median / Mean value as of 7 months ago (Consensus Analysis Only). • 8MA - Median / Mean value as of 8 months ago (Consensus Analysis Only). • 9MA - Median / Mean value as of 9 months ago (Consensus Analysis Only). • 10MA - Median / Mean value as of 10 months ago (Consensus Analysis Only). • 11MA - Median / Mean value as of 11 months ago (Consensus Analysis Only). • 12MA - Median / Mean value as of 12 months ago (Consensus Analysis Only). • 13MA - Median / Mean value as of 13 months ago (Consensus Analysis Only). • 14MA - Median / Mean value as of 14 months ago (Consensus Analysis Only). • 15MA - Median / Mean value as of 15 months ago (Consensus Analysis Only). • 16MA - Median / Mean value as of 16 months ago (Consensus Analysis Only). • 17MA - Median / Mean value as of 17 months ago (Consensus Analysis Only). • 18MA - Median / Mean value as of 18 months ago (Consensus Analysis Only).
NPEstimates	Non-Periodic Estimates section.
NPEstimate	Non-Periodic Estimate. Contains the following attribute(s): • type: Estimate Type. Can have the following values: • TARGETPRICE - Target Price • LTGROWTH Long - Term Growth Rate • unit: Estimate units. Can have the following values: • U - Major Currency Units (x1.00) • T - Thousands of Major CU (x1000.00) • M - Millions ... (x1000000.00) • B - Billions ... (x1000000000.00) • MC - Minor Currency Units (x0.01) • P - Percent (%)
ConsEstimate	Consensus Estimate. Contains the following attribute(s): • type: Consensus Estimate Type. Can have the following values: • High - High Estimate • Low - Low Estimate • Mean - Mean Estimate • Median - Median Estimate • StdDev - Standard Deviation • NumOfEst - Number of Estimates • Upgradings - Number of Estimates upgraded. (Consensus Analysis Only) • Dngradings - Number of Estimates downgraded. (Consensus Analysis Only)
Recommendations	Recommendations.
STOpinion	Opinions.
ConsOpinion	Consensus Opinion. Contains the following attribute(s): • set: Opinion Set. Can have the following values: • STD - Standard • code: Opinion Code. Can have the following values: • 1 - Buy • 2 - Outperform • 3 - Hold • 4 - Underperform • 5 - Sell • 6 - No Opinion • desc: Opinion Description. Can have the following values: • BUY - Buy • OUTPERFORM - Outperform • HOLD - Hold • UNDERPERFORM - Underperform • SELL - Sell • NA - No Opinion



16.6.6 Detailed Information Section

The following format is an example of specifying the Estimates Detailed Information section in analysis data for a company:

XML Sample Response - Estimates Detailed Information Section

```
<GetDetailed_Response_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Estimates_1">
  <EstimatesDetailedInformation xmlns="http://schemas.reuters.com/ns/2008/01/12/webservices/rkd/EstimatesDetailedAPI_1" Major="1" Minor="0" Revision="0">
    <RepNo>4741N</RepNo>
    <CompanyName Type="Primary">International Business Machines Corp.</CompanyName>
    <Production Date="2007-06-06T13:30:49" />
    <DetEstimates>
      <FYEstimates>
        <FYEstimate unit="U" type="BVPS">
          <FYPeriod endMonth="12" endCalYear="2005" periodType="A" fYear="2005">
            <DetEstimate teamId="US_" brokerId="US_67">
              <EstValue suppr="false" expir="2006-01-13T14:45:27" confirm="2005-12-21T15:30:00" orig="2005-12-21T15:30:00"
              dateType="PRV1">20.1600</EstValue>
              <EstValue suppr="false" expir="2006-09-19T09:28:00" confirm="2006-01-13T14:45:27" orig="2006-01-13T14:45:27"
              dateType="CURR">20.1500</EstValue>
            </DetEstimate>
            <DetEstimate teamId="US_384539" brokerId="US_4589">
              <EstValue suppr="false" confirm="2005-10-28T14:30:00" orig="2005-10-28T14:30:00"
              dateType="CURR">20.7500</EstValue>
            </DetEstimate>
            <DetEstimate teamId="US_201373" brokerId="US_11581">
              <EstValue suppr="false" confirm="2005-10-18T15:30:00" orig="2005-10-18T15:30:00"
              dateType="CURR">19.0000</EstValue>
            </DetEstimate>
          </FYPeriod>
        </FYEstimate>
      </FYEstimates>
      <NPEstimates>
        <NPEstimate unit="P" type="LTGROWTH">
          <DetEstimate teamId="US_303859" brokerId="US_2">
            <EstValue suppr="false" confirm="2007-05-11T22:26:04" orig="2002-01-28T21:01:00" dateType="CURR">10.0000</
            EstValue>
          </DetEstimate>
          <DetEstimate teamId="US_155877" brokerId="US_27">
            <EstValue suppr="false" confirm="2007-02-07T11:22:18" orig="2003-11-18T23:43:00" dateType="CURR">11.0000</
            EstValue>
          </DetEstimate>
          <DetEstimate teamId="US_397588" brokerId="US_85">
            <EstValue suppr="false" confirm="2007-04-18T13:55:21" orig="2006-11-06T19:08:03" dateType="CURR">9.0000</
            EstValue>
          </DetEstimate>
          <DetEstimate teamId="US_155188" brokerId="US_3202">
            <EstValue suppr="false" confirm="2007-04-25T17:30:04" orig="2005-01-19T19:14:28" dateType="CURR">8.0000</
            EstValue>
          </DetEstimate>
          <DetEstimate teamId="US_406131" brokerId="US_3414">
            <EstValue suppr="false" confirm="2007-04-24T21:04:20" orig="2007-04-24T21:04:20" dateType="CURR">10.0000</
            EstValue>
            <EstValue suppr="false" expir="2007-04-24T21:04:20" confirm="2007-04-17T13:46:19" orig="2007-04-17T13:46:19"
            dateType="PRV1">12.0000</EstValue>
          </DetEstimate>
          <DetEstimate teamId="US_393203" brokerId="US_5451">
            <EstValue suppr="false" confirm="2007-04-24T19:26:16" orig="2007-04-24T19:26:16" dateType="CURR">11.1200</
            EstValue>
            <EstValue suppr="false" expir="2007-04-24T19:26:16" confirm="2007-04-17T14:41:12" orig="2006-09-07T20:56:27"
            dateType="PRV1">11.0000</EstValue>
          </DetEstimate>
          <DetEstimate teamId="US_159597" brokerId="US_8504">
            <EstValue suppr="false" confirm="2007-04-24T15:14:41" orig="2001-12-12T05:00:00" dateType="CURR">12.0000</
            EstValue>
          </DetEstimate>
          <DetEstimate teamId="US_194815" brokerId="US_9211">
            <EstValue suppr="false" confirm="2007-05-09T13:30:00" orig="2006-07-18T05:00:00" dateType="CURR">10.0000</
            EstValue>
          </DetEstimate>
        </NPEstimate>
      </NPEstimates>
    </DetEstimates>
  </EstimatesDetailedInformation>
</GetDetailed_Response_1>
```



```

</DetEstimate>
<DetEstimate teamId="US_161789" brokerId="US_9584">
  <EstValue suppr="false" confirm="2007-04-25T00:00:00" orig="2006-04-20T00:00:00" dateType="CURR">10.0000</
  EstValue>
  <EstValue suppr="false" expir="2006-04-20T00:00:00" confirm="2006-03-30T00:00:00" orig="2006-01-06T00:00:00"
  dateType="PRV1">12.0000</EstValue>
</DetEstimate>
<DetEstimate teamId="US_157330" brokerId="US_10333">
  <EstValue suppr="false" confirm="2007-04-23T11:15:04" orig="2005-04-18T20:01:06" dateType="CURR">10.0000</
  EstValue>
  <EstValue suppr="false" expir="2005-04-18T20:01:06" confirm="2005-04-15T20:01:16" orig="2005-04-15T20:01:16"
  dateType="PRV1">15.0000</EstValue>
</DetEstimate>
<DetEstimate teamId="US_201373" brokerId="US_11581">
  <EstValue suppr="false" confirm="2007-04-18T11:54:54" orig="2005-05-05T18:19:00" dateType="CURR">10.0000</
  EstValue>
  <EstValue suppr="false" expir="2005-05-05T18:19:00" confirm="2005-04-18T20:52:19" orig="2005-04-18T20:52:19"
  dateType="PRV1">11.3000</EstValue>
</DetEstimate>
<DetEstimate teamId="US_372336" brokerId="US_20481">
  <EstValue suppr="false" confirm="2007-04-18T17:14:41" orig="2006-07-17T15:25:48" dateType="CURR">15.0000</
  EstValue>
</DetEstimate>
</NPEstimate>
...
</NPEstimates>
<Recommendations>
  <STOpinion>
    <DetOpinion teamId="US_303859" brokerId="US_2">
      <OpinionValue suppr="false" confirm="2007-05-11T22:26:04" orig="2006-10-18T05:00:34" dateType="CURR">
        <OpCode code="3" set="STD">HOLD</OpCode>
        <OpCode code="2" set="BKR">NEUTRAL</OpCode>
      </OpinionValue>
      <OpinionValue suppr="false" expir="2006-10-18T05:00:34" confirm="2006-10-18T03:39:30" orig="2002-10-
      17T06:30:00" dateType="PRV1">
        <OpCode code="1" set="STD">BUY</OpCode>
        <OpCode code="1" set="BKR">BUY</OpCode>
      </OpinionValue>
    </DetOpinion>
    ...
  </STOpinion>
  <SupOpinion>
    <DetOpinion teamId="US_303859" brokerId="US_2">
      <OpinionValue confirm="2007-04-24T14:30:00" orig="2004-09-15T19:12:35" dateType="CURR">
        <OpCode code="B" set="BKR">Medium</OpCode>
      </OpinionValue>
    </DetOpinion>
    ...
  </SupOpinion>
</Recommendations>
</DetEstimates>
</EstimatesDetailedInformation>
</GetDetailed_Response_1>

```

Attribute	Description
DetEstimates	Detailed Estimates Section.
FYEstimates	Fiscal Year Estimates contains multiple FYEstimate items.
FYEstimate	Fiscal Year Estimate. Contains the following attribute(s): • Type: Estimate Type • EPS - EPS based on earnings pre exceptional and post goodwill. • FFO - North American companies only. • REVENUE - Revenue. • DPS - Dividends Per Share based on earnings pre exceptional and post goodwill. • NAV - NAV. • NPROFIT - Net Profit based on earnings pre exceptional and post goodwill. • OPROFIT - Operating Profit. • PPROFIT - Pre-tax Profit based on earnings pre exceptional and post goodwill. • RPROFIT - Recurring Profit.



	• CPS - Cash Flow Per Share. • EBITDA - EBITDA. • EBIT - EBITA. • EPSREP - EPS reported or GAAP basis. • EPSEBG - EPS based on earnings pre goodwill and pre exceptional. • NPROFITREP - Net Profit reported or GAAP basis. • NPROFITEBG - Net Profit based on earnings pre goodwill and pre exceptional. • PPROFITREP - Pre Tax Profit reported or GAAP basis. • PPROFITEBG - Pre Tax Profit based on earnings pre goodwill and pre exceptional. • BVPS - Book Value Per Share. • NDEBT - Net Debt. • CAPEX - Capital Expenditure. • SLREVENUE - Software License Revenue. • ARPU - Average Revenue Per Unit. • USALES - Unit Sales. • T1R - Tier 1 Ratio. • B2BR- Book to Bill Ratio. • SUBSCRS - Subscribers. • OUTOILGAS - Output, Oil and Gas. • ROA - Return on Assets. • ROE - Return on Equity. • Units: Estimate units • U - Major Currency Units (x1.00). • T - Thousands of Major CU (x1000.00). • M - Millions ... (x1000000.00). • B - Billions ... (x1000000000.00). • MC - Minor Currency Units (x0.01). • P - Percent (%).
FYPeriod	Fiscal Year Period. Contains the following attribute(s): • fyear: Fiscal Year • periodType: Fiscal Period's Type. Can have the following values: • A - Annual • Q - Quarterly • S - Semi-annual • T - Trimester (Reserved for future use) • M - Monthly (Reserved for future use) • periodNum: Fiscal Period's Number (not provided for Annual period). Can contain values (1,2,3,4,5-12). • endCalYear: Period End Calendar Year. • endMonth: Period End Month.
DetEstimate	Detailed Estimate. Contains the following attribute(s): • teamID • brokerID
EstValue	Estimate value. Contains the following attribute(s): • dateType: Date Type. Can have the following values: • CURR - Current Estimate (note applicable for Upgradings or Dngradings). • 1WA - Median / Mean value as of last week. Number of upgrades / downgrades between last week and current estimates (Consensus Analysis Only). • 1MA - Median / Mean value as of last month. Number of upgrades / downgrades between last month and current estimates (Consensus Analysis Only). • 2MA - Median / Mean value as of 2 months ago. Number of upgrades /downgrades between 2 months ago and current estimates (Consensus Analysis Only). • 3MA- Median / Mean value as of 3 months ago. Number of upgrades / downgrades between 3 months ago and current estimates (Consensus Analysis Only). • 4MA - Median / Mean value as of 4months ago (Consensus Analysis Only). • 5MA - Median / Mean value as of 5 months ago (Consensus Analysis Only). • 6MA - Median / Mean value as of 6 months ago (Consensus Analysis Only).



	• 7MA - Median / Mean value as of 7 months ago (Consensus Analysis Only). • 8MA - Median / Mean value as of 8 months ago (Consensus Analysis Only). • 9MA - Median / Mean value as of 9 months ago (Consensus Analysis Only). • 10MA - Median / Mean value as of 10 months ago (Consensus Analysis Only). • 11MA - Median / Mean value as of 11 months ago (Consensus Analysis Only). • 12MA - Median / Mean value as of 12 months ago (Consensus Analysis Only). • 13MA - Median / Mean value as of 13 months ago (Consensus Analysis Only). • 14MA - Median / Mean value as of 14 months ago (Consensus Analysis Only). • 15MA - Median / Mean value as of 15 months ago (Consensus Analysis Only). • 16MA - Median / Mean value as of 16 months ago (Consensus Analysis Only). • 17MA - Median / Mean value as of 17 months ago (Consensus Analysis Only). • 18MA - Median / Mean value as of 18 months ago (Consensus Analysis Only).
NPEstimates	Non-Periodic Estimates section.
NPEstimate	Non-Periodic Estimate. Contains the following attribute(s): • type: Estimate Type. Can have the following values: • TARGETPRICE - Target Price • LTGROWTH Long - Term Growth Rate • unit: Estimate units. Can have the following values: • U - Major Currency Units (x1.00) • T - Thousands of Major CU (x1000.00) • M - Millions ... (x1000000.00) • B - Billions ... (x1000000000.00) • MC - Minor Currency Units (x0.01) • P - Percent (%)
Recommendations	Recommendations.
STOpinion	Opinions.
DetOpinion	Consensus Opinion. Contains the following attribute(s): • set: Opinion Set. Can have the following values: • STD - Standard • code: Opinion Code. Can have the following values: • 1 - Buy • 2 - Outperform • 3 - Hold • 4 - Underperform • 5 - Sell • 6 - No Opinion • desc.: Opinion Description. Can have the following values: • BUY - Buy • OUTPERFORM - Outperform • HOLD - Hold • UNDERPERFORM - Underperform • SELL - Sell • NA - No Opinion
SupOpinion	SupOpinions.



chapter 17 Estimates IBES

The Estimates IBES API is a SOAP-based web service that provides access to Estimates IBES content. The Estimates IBES content incorporates sell side estimates data, analytical data, company issued guidance, recommendation/ target price, detailed estimates, estimates statement and actual view.

17.1 Authentication/Authorization, Service Endpoint, and Required Headers

Authorization

All requests to the Thomson Reuters Estimates IBES web service require an authorization token. For details, see section Understanding Authentication Tokens.

Authentication

Thomson Reuters Estimates IBES uses Reuters impersonation tokens for each effective user. In this case, Thomson Reuters must create each user before your application authenticates them. Unmanaged effective users are not supported in Estimates IBES.

For additional information, see section Creating a Token.

Service Endpoint

Estimates IBES Endpoint

<http://api.rkd.reuters.com/api/EstimatesIBES/EstimatesIBES.svc>

Required Header

Required HTTP Headers

POST /api/EstimatesIBES/EstimatesIBES.svc HTTP/1.1
Content-Type: application/soap+xml
Host: api.rkd.reuters.com
Content-Length: [length]

17.2 WSDL

WSDL:

http://api.rkd.reuters.com/schemas/EstimatesIBES/wSDL/EstimatesIBES_1_HttpAndRKDToken.wsdl

17.3 Get Estimate Coverage (GetEstimateCoverage_1)

Use the GetEstimateCoverage_1 operation to retrieve all contributors and associated analysts who provide the Estimate data for the given company, measure and period.

The example below retrieves estimate coverage for IBM.

XML Sample Request - Retrieving IBES Estimates Coverage Information

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
```




```

<To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/EstimatesIBES/EstimatesIBES.svc</To>
<MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
<Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/
GetEstimateCoverage_1</Action>
<Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
  <ApplicationID>[AppID]</ApplicationID>
  <Token>[Impersonation Token]</Token>
</Authorization>
</Header>
<Body>
  <GetEstimateCoverage_Request_1 xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1">
    <Symbol xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/Criteria/Symbol">
      <Type>Ric</Type>
      <Value>IBM.N</Value>
    </Symbol>
  </GetEstimateCoverage_Request_1>
</Body>
</Envelope>

```

The following table lists the parameters you can use in the request:

Attribute	Description
Symbol	Shows symbol for which the coverage has to be returned. Includes the following values: • Type - defines symbol type. The following types are supported: - o Ibex Ticker - o Ric • Value - input value for the symbol.
Measure	A collection of Measure Criterion (optional input). Can have the following values: • Code - measure code value supported by the input symbol, or can be given as Preferred or All. • SegmentCode - code that describes the segment. If no measure is provided then only the Preferred Measure will be returned.
RelativePeriod	This optional attribute determines the relative period to be returned. Can have the following values: • Type - defines relative period type: Annual, Interim or Monthly. • Number - defines number of periods ahead or before the current period. Type and Number can be in the following range: 1. Annual - ANN-10 to ANN5 2. Interim - INT-20 To INT20 3. Monthly - MON-47 To MON12 When no period is supplied the default is Annual1.
FiscalPeriod	This optional attribute determines the fiscal period to be returned. Possible values are: • Type - Fiscal period type. Can be: FY, QTR1, QTR2, QTR3, QTR4, SAN1, SAN2, MON1, MON2, MON3, MON4, MON5, MON6, MON7, MON8, MON9, MON10, MON11, MON12. • Year - fiscal year. Fiscal Period Year should be between 1990-2030.
IncludeAnalysts	Allows retrieving information analyst names with the contributor: True or False.
OutputIndustryCodeType	Indicates what industry code to return in the response. If specified, only events related to the requested industry will be included in the search results. The supported code schema is Trbc.

The response returns the following information:

XML Sample Response - Retrieving IBES Estimates Coverage Information

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/
GetEstimateCoverage_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>

```



```

<s:Body>
  <GetEstimateCoverage_Response_1 xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1">
    <EstimateCoverage xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1_Types">
      <Organization>
        <Name>International Business Machines Corp</Name>
        <DisplaySymbol xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/Criteria/Symbol">
          <DisplayValue>IBM</DisplayValue>
          <Symbol>
            <Type>Ric</Type>
            <Value>IBM.N</Value>
          </Symbol>
        </DisplaySymbol>
        <Industry>
          <Code>
            <Type xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/Criteria/Industry">Trbc</Type>
            <Value xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/Criteria/Industry">57201010</Value>
          </Code>
          <Name>IT Services & Consulting</Name>
        </Industry>
        <ValueFormats>
          <ValueFormat>
            <Type>NonPerShare</Type>
            <Name>Per-share</Name>
            <Scale>1</Scale>
            <Unit>Money</Unit>
            <CurrencyCode>USD</CurrencyCode>
          </ValueFormat>
        </ValueFormats>
        <PreferredMeasureCode>EPS</PreferredMeasureCode>
        <PrimaryReportingBasis>Consolidated</PrimaryReportingBasis>
        <HasMultipleReportingBases>false</HasMultipleReportingBases>
        <CountryCode>USA</CountryCode>
        <CountryName>United States</CountryName>
      </Organization>
      <Contributors>
        <Contributor>
          <ContribID>9584</ContribID>
          <Name>PERMISSION_DENIED</Name>
        </Contributor>
        <Contributor>
          <ContribID>6872</ContribID>
          <Name>SANFORD C. BERNSTEIN & CO., LLC </Name>
        </Contributor>
        ...
        <Contributor>
          <ContribID>60797</ContribID>
          <Name>PERMISSION_DENIED</Name>
        </Contributor>
      </Contributors>
    </EstimateCoverage>
  </GetEstimateCoverage_Response_1>
</Body>
</Envelope>

```

The following table lists the parameters returned by response:

Attribute	Description
Organization	The company name and symbol of subject company. Can have the following values: • Name - the organization's name. • Symbol - the symbol type and value in the request for company events.
Industry	Provides information on what industries the company is a component of. Can have the following values: • Code - industry code based on TRBC classification. • Name - industry name.
ValueFormats	A collection of value formats, one for each measure value type (Per share, Non Per Share, Ratio). Can have the following values: • Type - shows type of value (per share, non per share or ratio). • Name - name of value format. • Scale - scaling factor (e.g.1 or 1000000). • Unit - shows unit type (Money or Percentage).



	• CurrencyCode - shows currency code for the current value format.
PreferredMeasureCode	Shows measure code that is the default for this company.
PrimaryReportingBasis	Shows reporting basis for the company (either Parent or Consolidated).
HasMultipleReportingBases	Indicates whether the company has estimates for both Parent & Consolidated.
CountryCode	Country code in ISO format.
CountryName	Country name.
Contributor	Includes: • A collection of Contributor Object with ContribID - contributor ID and Name - contributor name (if available). • A collection of Analyst (returned only when Include Analysts is set to true) with the following attributes: Analyst Code, Name and Rating (Estimate, Recommendation, RecommendationOverall).

17.4 Get Estimate Detail (GetEstimateDetail_1)

The GetEstimateDetail_1 method returns the Estimates value for a company given by each contributors/analysts if future period is selected as input for all measures/single measure selected. If the selected period is historical then the Actual value of that company for the given period will be returned for all measures/single measure selected.

The example below retrieves actual data for IBM for the specified measure and period.

XML Sample Request - Retrieving IBES Estimates Details

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/EstimatesIBES/EstimatesIBES.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/GetEstimateDetail_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetEstimateDetail_Request_1 xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1">
      <Symbol xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/Criteria/Symbol">
        <Type>Ric</Type>
        <Value>IBM.N</Value>
      </Symbol>
      <Measures xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1_Types">
        <Measure>
          <Code>All</Code>
        </Measure>
      </Measures>
      <ReportingBasis>Primary</ReportingBasis>
      <FiscalPeriods xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1_Types">
        <FiscalPeriod>
          <Type>FY</Type>
          <Year>2000</Year>
        </FiscalPeriod>
      </FiscalPeriods>
    </GetEstimateDetail_Request_1>
  </Body>
</Envelope>
```

The following table contains the description of parameters that can be used in the request:

Attribute	Description
Symbol	Shows symbol for which the coverage has to be returned. Includes the following values:



	• Type - defines symbol type. The following values are available: - o Ibex Ticker - o Ric • Value - input value for the symbol.
Measures	List of Measure criterion where single/multiple measures can be provided. Also AllMeasures/PreferredMeasure can be given. Can have the following values: • Code - measure code value supported by the input symbol, or can be given as Preferred or All. • SegmentCode - code that describes the segment.
ReportingBasis	Determines reporting basis. Can have the following values: • Primary • Parent • Consolidated This is only used when All is specified as the Measure Code. If a specific measure is entered, it will be used to determine the reporting basis. If left blank, and All is specified as the Measure Code, both reporting bases are returned (Parent and Consolidated).
RelativePeriod	This optional attribute determines the relative period to be returned. Can have the following values: • Type - defines relative period type: Annual, Interim or Monthly. • Number - defines number of periods ahead or before the current period. Multiple relative periods can be provided. When no period is supplied the default is Annual 0.
FiscalPeriod	This optional attribute determines the fiscal period to be returned. Possible values: • Type - Fiscal period type. Can be: FY, QTR1, QTR2, QTR3, QTR4, SAN1, SAN2, MON1, MON2, MON3, MON4, MON5, MON6, MON7, MON8, MON9, MON10, MON11, MON12. • Year - fiscal year. Multiple fiscal periods can be provided.
ContribId	Defines contributor ID for which the Estimates Data will be returned only.
DetailOptions	The following options are available: • IncludeActuals - when specified the response shall have the actual data as reported by the company. • IncludeBibliography - when specified the response shall include additional reference doc IDs (research). • IncludeFootnotes - when specified the response shall include any foot notes that apply to the estimate, actual or the organization. • IncludeInterimPeriodsWithAnnual - this option should be specified only when requesting details for annual periods. If this is set to true the response shall have data for interim (QTR, SAN) periods as available in the database. • IncludeLongTermGrowthEstimates - when specified and set to true the response will return LongTermGrowth estimates. • IncludePriceTargets - when specified the response will return Price target data for the organization. • IncludeRecommendations - when specified the response will return the broker Recommendation data for the company. • IncludeSummary - when specified a short Summary of the Estimate data will be returned in response. • OutputIndustryCodeType - indicates what Industry code to return in the response. • ReturnOnlyBoldEstimates - will only return details for estimates marked as bold in the Starmine data. Bold estimates are on forward estimates, they are not on reported periods.

The response returns the following data:

XML Sample Response - Retrieving IBES Estimates Details

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/GetEstimateCoverage_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
```



```

<GetEstimateDetail_Response_1 xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1">
  <EstimateDetail xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1_Types">
    <Organization>
      <Name>International Business Machines Corp</Name>
      <DisplaySymbol xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/Criteria/Symbol">
        <DisplayValue>IBM</DisplayValue>
        <Symbol>
          <Type>Ric</Type>
          <Value>IBM.N</Value>
        </Symbol>
      </DisplaySymbol>
      <Industry>
        <Code>
          <Type xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/Criteria/Industry">Trbc</Type>
          <Value xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/Criteria/Industry">0000</Value>
        </Code>
        <Name>UNCLASSIFIED</Name>
      </Industry>
      <ValueFormats>
        <ValueFormat>
          <Type>NonPerShare</Type>
          <Name>Non Per-share</Name>
          <Scale>1000000</Scale>
          <Unit>Money</Unit>
          <CurrencyCode>USD</CurrencyCode>
        </ValueFormat>
        <ValueFormat>
          <Type>NonPerShare</Type>
          <Name>Per-share</Name>
          <Scale>1</Scale>
          <Unit>Money</Unit>
          <CurrencyCode>USD</CurrencyCode>
        </ValueFormat>
        <ValueFormat>
          <Type>NonPerShare</Type>
          <Name>Ratio</Name>
          <Scale>1</Scale>
          <Unit>Percentage</Unit>
          <CurrencyCode>USD</CurrencyCode>
        </ValueFormat>
      </ValueFormats>
      <PreferredMeasureCode>EPS</PreferredMeasureCode>
      <PrimaryReportingBasis>Consolidated</PrimaryReportingBasis>
      <HasMultipleReportingBases>>false</HasMultipleReportingBases>
      <CountryCode>USA</CountryCode>
      <CountryName>United States</CountryName>
    </Organization>
    <Measures></Measures>
  </EstimateDetail>
</GetEstimateDetail_Response_1>
</Body>
</Envelope>

```

The following table lists the parameters returned by response:

Attribute	Description
Organization	The company name and symbol of subject company. Can have the following values: • Name - the organization's name • Symbol - the symbol type and value in the request for company events
Industry	Provides information on what industries the company is a component of. Can have the following values: • Code - industry code based on TRBC classification • Name - industry name
ValueFormats	A collection of value formats one for each measure value type (Per share/Non Per Share/Ratio). Can have the following values: • Type - shows type of value (per share, non per share or ratio) • Name - name of value format • Scale - scaling factor (e.g. 1 or 1000000) • Unit - shows unit type (Money or Percentage) • CurrencyCode - shows currency code for the current value format



PreferredMeasureCode	Shows measure code that is the default for this company.
PrimaryReportingBasis	Shows reporting basis for the company (either Parent or Consolidated).
HasMultipleReportingBases	Indicates whether the company has estimates for both Parent & Consolidated.
CountryCode	Country code in ISO format.
CountryName	Country name.
Measures	It has the following sections: Measure: Contains the measure detail as described below: • Code - 3 or 6 letter measure code • Name - measure long name • Abbreviation - abbreviated measure name • IsPreferred - is it a preferred measure or not • Reporting Basis - Consolidated or Parent • ValueFormat - - o Type - NonPerShare, Pershare or Ratio - o Name - name of the type - o Scale - scaling factor (e.g.1 or 1000000) - o Unit - Money, Percentage - o Currency code - like USD, INR etc. • Section - one of the following: Income statement, Cash Flow, Balance Sheet, Valuation. It will be returned for all measures except Recommendation and Target Prices. • CalculationFormat - - o Type - Absolute or Percentage for all supported Calculation types (year over year, etc.) - o Name - name of the calculation format - o Scale - scaling factor - o Unit - Money or Percentage • Segment - Only returned for measures where segments are available (Pharmaceuticals, Same Store Sales etc.). - o Code - segment code - o Category - segment category (for example, Pharmaceuticals) - o Name - segment name - o Abbreviation - segment abbreviation • SubSegments - every segment will have at least one subsegment ~ Code - subsegment code ~ Category - subsegment category ~ Name - subsegment Name ~ Abbreviation - subsegment abbreviation • PrecisionDetail - number of decimal places used to display Detail Estimate data for that company • PrecisionSummary - number of decimal places used to display Summary Estimates data for that company LongTermGrowthEstimates: It has the Long Term Growth details given by each contributor/analyst. • Contributor - Contributor details with analyst if any - o ContribID - o Name - o Analyst (returned only when Include Analysts is set to true) with the following attributes: ~ Analyst Code ~ Name ~ Rating - Estimate, Recommendation, RecommendationOverall • Unverified - unverified value • Preliminary - preliminary value • Current - current value • Previous - previous value • RevisionDate - LongTermGrowth estimate revision date • ReviewDate - review date • Summary - has the summary data for UnverifiedMean, PreliminaryMean and Mean. • IsExcludedFromMean - is excluded from mean or not. • Footnotes - - o Type - one of the three footnote types: Company, Instrument and Estimate-level footnotes - o Subtype



- o Entry Date - footnote date
- o Subject - All, Current, Previous
- o IsSignificant - is significant or not
- o Text - footnote text
- Bibliography - additional reference doc IDs (research):
 - o UnverifiedDocumentId
 - o PreliminaryDocumentId
 - o CurrentDocumentId
 - o PreviousDocumentId

Period: Gives the details of which fiscal/relative period the data belongs to. For future periods Estimates values are returned and for historical periods Actual values are returned.

Estimate Period:

- RelativePeriod - it can be any of the below and in respective range.
- Annual - ANN-10 to ANN5
- Interim - INT-20 to INT20
- Monthly- MON-47 to MON12
- Fiscal Period:
 - o Type can be: FY, QTR1, QTR2, QTR3, QTR4, SAN1, SAN2, MON1, MON2, MON3, MON4, MON5, MON6, MON7, MON8, MON9, MON10, MON11, MON12.
 - o Fiscal Period Year: Should be between 1990-2030.
- CalendarYear - year
- CalendarMonth - month
- ActualReportDate - actual reported date

Actuals - a collection of actual data for each segment/sub-segment. This data will be returned only for past periods (Where earnings have already been reported). For measures without segment there will be only one element in the collection.

- Currency code - currency value (for example, USD, CAD)
- Reported - actual value reported
- ReportedDate - date when actual was reported
- Restated - actual value restated
- RestatedDate - date when actual was restated
- PostReport30DayPriceChangePercent - the change in the stock price of the company 30 days after the company reported financial results
- SurprisePercent - surprise percentage for this period/measure, calculated as (actual - mean) / mean
- Surprise60DayPercent - the percentage difference between the actual reported by the company and the mean estimate for that ticker/measure/period 60 days prior to the day of report
- SurpriseMean - the arithmetic average of estimates at the release of earnings to the marketplace, for the period indicated
- StandardizedUnexpectedEarnings - the standardized unanticipated earnings score, calculated as (actual - mean) / standard deviation of summary estimates
- NumberOfEstimates - number of estimates given
- SegmentCode - segment code
- SubSegmentCode - sub segment code

Estimates - has estimate value given by each contributor/analyst if period is future.

- Contributor - Contributor details with analyst if any
 - o ContribID
 - o Name
 - o Analyst (shall only be returned when Include Analysts is set to true) with the following attributes:
 - ~ Analyst Code
 - ~ Name
 - ~ Rating - Estimate, Recommendation, RecommendationOverall
- Unverified - unverified value
- Preliminary - preliminary value
- Current - current value
- Previous - previous value
- RevisionDate - revision date
- ReviewDate - reviewed date
- CurrencyCode - like USD, INR etc.
- Calculations - Type, Value
- Summary:
 - o UnverifiedMean - mean estimate taking into account all estimate revisions that have been



	submitted by contributors but not yet verified as valid by the IBES Estimates Content Operations Team. This provides what the mean would be if all data received from contributors is verified. - o PreliminaryMean - mean estimate including all revisions verified by the IBES Estimates Content Operations Team since the last Analytics (SmartEstimate, Predicted Surprise, etc) were created - o Mean - the mean of all estimates included in the summary - o SmartEstimate - the Smart Estimate - o PredictedSurprise - the Predicted Surprise amount - o PredictedSurprisesIsSignificant - whether the Predicted Surprise is significant - o High - the highest estimate included in the summary - o Low - the lowest estimate included in the summary • IsExcludedFromMean - true/false • Footnotes - - o Type - one of the three footnote types: Company, Instrument and Estimate-level footnotes - o Subtype - o EntryDate - footnote date - o Subject - All, Current, Previous - o IsSignificant - is significant or not - o Text - footnote text • EarningsAccuracy - value of accuracy of earnings • IsBold - is bold estimate or not • IsSignificant - is significant or not • IsHigh - if high will be true • IsLow - if low will be true • SmartEstimate - - o Weight - the percentage weight that this estimate contributed to the SmartEstimate - o Note - if this estimate was excluded from the SmartEstimate, this field will represent the reason why it was excluded (Outlier, Cluster, Age) • SegmentCode - segment code • SubSegmentCode - sub segment code • Bibliography - Current DocID: - o UnverifiedDocumentId - o PreliminaryDocumentId - o CurrentDocumentId - o PreviousDocumentId Footnotes - - o Type - one of the three footnote types: Company, Instrument and Estimate-level footnotes - o Subtype - o Entry Date - footnote date - o Subject - All, Current, Previous - o IsSignificant - is significant or not - o Text - footnote text
PriceTargets	• Contributor - Contributor details with analyst if any - o ContribID - o Name - o Analyst (shall only be returned when Include Analysts is set to true) with the following attributes: ~ Analyst Code ~ Name ~ Rating - Estimate, Recommendation, RecommendationOverall • Unverified - unverified value • Preliminary - preliminary value • Current - current value • Previous - previous value • RevisionDate - revision date • Summary - has the summary data for UnverifiedMean, PreliminaryMean and Mean. • CurrencyCode - like USD, INR etc. • LastClosingPrice - last closing price • DifferencePercent - percentage difference • UnverifiedHorizon - time horizon of the unverified estimate • PreliminaryHorizon - time horizon of the preliminary estimate • CurrentHorizon - time horizon of the current estimate • PreviousHorizon -time horizon of the previous estimate • Bibliography - additional reference doc IDs (research): - o UnverifiedDocumentId



	- o PreliminaryDocumentId - o CurrentDocumentId - o PreviousDocumentId
Recommendations	• Contributor - Contributor details with analyst if any - o ContribID - o Name - o Analyst (shall only be returned when Include Analysts is set to true) with the following attributes: ~ Analyst Code ~ Name ~ Rating - Estimate, Recommendation, RecommendationOverall • Unverified - unverified value. • Preliminary - preliminary value. • Current - current value • Previous - previous value • RevisionDate - revision date • ReviewDate - reviewed date • Summary - has the summary data for UnverifiedMean, PreliminaryMean and Mean. • UnverifiedText - unverified text • PreliminaryText - preliminary text • CurrentText - current text • PreviousText - previous text • Bibliography - additional reference doc IDs (research): - o UnverifiedDocumentId - o PreliminaryDocumentId - o CurrentDocumentId - o PreviousDocumentId

17.5 Get Estimate Measures (GetEstimateMeasures_1)

The GetEstimateMeasures_1 method delivers a list of all Estimates measures for which estimates are available, and the periods for which the measures have data.

The following example retrieves estimates measures for IBM.

XML Sample Request - Retrieving IBES Estimates Measures Data

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/EstimatesIBES/EstimatesIBES.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/GetEstimateMeasures_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetEstimateMeasures_Request_1 xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1">
      <Symbol xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/Criteria/Symbol">
        <Type>Ric</Type>
        <Value>IBM.N</Value>
      </Symbol>
      <OutputIndustryCodeType>Trbc</OutputIndustryCodeType>
    </GetEstimateMeasures_Request_1>
  </Body>
</Envelope>
```

The following table lists the parameters that can be used in the request:

Attribute	Description



Symbol	Shows symbol for which the coverage has to be returned. Includes the following values: • Type - defines symbol type. The following types are supported: - o Ibex Ticker - o Ric • Value - input value for the symbol.
OutputIndustryCodeType	Indicates what industry code to return in the response. If specified, only events related to the requested industry will be included in the search results. The supported code schema is Trbc.
ReturnMeasuresForPrimaryReportingBasisOnly	If true returns only those measures whose reporting basis is Primary, otherwise All measures.
IncludeHistoricalPeriods	This optional attribute determines the fiscal period(s) to be returned. The attribute accepts years (2010,2011) and does not accept hints (CURR,NEXT). If you want to use hints, you must use the FiscalPeriodHintsOnly attribute.

The response returns the following data:

XML Sample Response - Retrieving IBES Estimates Measures Data

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/
    GetEstimateCoverage_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetEstimateMeasures_Response_1 xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1">
      <PrimaryReportingBasis>Consolidated</PrimaryReportingBasis>
      <EstimateMeasures xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1_Types">
        <EstimateMeasure>
          <Code>BPS</Code>
          <Name>Book Value per Share</Name>
          <Abbreviation>BPS</Abbreviation>
          <IsPreferred>false</IsPreferred>
          <ReportingBasis>Consolidated</ReportingBasis>
          <ValueFormat>
            <Type>PerShare</Type>
            <Name>Per-share</Name>
            <Scale>1</Scale>
            <Unit>Money</Unit>
            <CurrencyCode>USD</CurrencyCode>
          </ValueFormat>
          <Section>Balance Sheet</Section>
          <PrecisionDetail>2</PrecisionDetail>
          <PrecisionSummary>3</PrecisionSummary>
          <SegmentPeriods>
            <SegmentPeriod>
              <RelativePeriod>
                <Type>Annual</Type>
                <Number>1</Number>
              </RelativePeriod>
              <FiscalPeriod>
                <Type>FY</Type>
                <Year>2011</Year>
              </FiscalPeriod>
              <CalendarYear>2011</CalendarYear>
              <CalendarMonth>12</CalendarMonth>
              <ActualReportDate xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"></ActualReportDate>
            </SegmentPeriod>
            ...
          </SegmentPeriods>
        </EstimateMeasure>
        <EstimateMeasure>
          <Code>CPX</Code>
```



```

<Name>Capital Expenditure</Name>
<Abbreviation>CPX</Abbreviation>
<IsPreferred>>false</IsPreferred>
<ReportingBasis>Consolidated</ReportingBasis>
<ValueFormat>
...
</ValueFormat>
<Section>Cash Flow Statement</Section>
<PrecisionDetail>2</PrecisionDetail>
<PrecisionSummary>2</PrecisionSummary>
<SegmentPeriods>
  <SegmentPeriod>
    ...
  </SegmentPeriod>
</SegmentPeriods>
</EstimateMeasure>
</EstimateMeasures>
</GetEstimateMeasures_Response_1>

```

```

</Body>
</Envelope>

```

The following table lists the parameters returned by response:

Attribute	Description
PrimaryReportingBasis	Shows reporting basis for the company (either Parent or Consolidated).
EstimateMeasure	Contains the measure details as described below: • Code - 3 or 6 letter measure code • Name - measure long name • Abbreviation - abbreviated measure name • IsPreferred - is it a preferred measure or not • Reporting Basis - Consolidated or Parent • Value format - - o Type - NonPerShare, Pershare or Ratio - o Name - name of the type - o Scale - scaling factor (e.g. 1 or 1000000) - o Unit - Money, Percentage - o Currency code - like USD, INR etc. • Section - one of the following: Income statement, Cash Flow, Balance Sheet, Valuation. It will be returned for all measures except Recommendation and Target Prices • CalculationFormat - - o Type - Absolute or Percentage for all supported Calculation types (year over year etc) - o Name - name of the calculation format - o Scale - scaling factor - o Unit - Money, Percentage • Segments - Only returned for measures where segments available (Pharma, Same store sales, etc.) - o Code - segment code - o Category - segment category - o Name - segment name - o Abbreviation - segment abbreviation - o SubSegments - every Segment will have at least one subsegment: ~ Code - subsegment code ~ Category - subsegment category ~ Name - subsegment name ~ Abbreviation - subsegment abbreviation
PrecisionDetail	Number of decimal places used to display Detail Estimate data for that company.
PrecisionSummary	Number of decimal places used to display Summary Estimates data for that company.
SegmentPeriod	Collection of Estimate Period and SegmentCodes, one for each Period for which the data is available. Estimate Period: • RelativePeriod - it can be any of the below and in respective range. - o Annual - ANN-10 to ANN5 - o Interim - INT-20 To INT20 - o Monthly - MON-47 To MON12



- Fiscal Period
 - o Type can be: FY,QTR1 - QTR4, SAN1-SAN2, and MON1-MON12
 - o Fiscal Period Year should be between 1990-2030.
- CalendarYear - year
- CalendarMonth - month
- ActualReportDate - actual reported date

SegmentCodes is a collection of SegmentCode and is returned only for measures where segments are available (Pharmaceuticals, Same Store Sales, etc.)

- Code - segment code name
- SubSegmentCode - subsegment code name

17.6 Get Estimate Summaries (GetEstimateSummaries_1)

Use the GetEstimateSummaries_1 method to retrieve the Estimate summary data for the list of companies based on security, period and measure.

The following example retrieves summary data for IBM.

XML Sample Request - Retrieving IBES Estimate Summaries

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/EstimatesIBES/EstimatesIBES.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/GetEstimateSummaries_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetEstimateSummaries_Request_1 xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1">
      <Symbols xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/Criteria/Symbol">
        <Symbol>
          <Type>Ric</Type>
          <Value>IBM.N</Value>
        </Symbol>
      </Symbols>
      <Measures xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/Types">
        <Measure>
          <Code>All</Code>
        </Measure>
      </Measures>
      <ReportingBasis>Primary</ReportingBasis>
      <CalculationBasis xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
      <FiscalPeriods xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/Types">
        <FiscalPeriod>
          <Type>FY</Type>
          <Year>2000</Year>
        </FiscalPeriod>
      </FiscalPeriods>
    </GetEstimateSummaries_Request_1>
  </Body>
</Envelope>
```

The following table lists the parameters that can be used in the request:

Attribute	Description
Symbols	Shows symbol(s) for which the summaries have to be returned. Includes the following values: • Type - defines symbol type. The following types are supported: - o Ibex Ticker - o Ric • Value - input value for the symbol.



Measure	List of Measure criterion where a single or multiple measures can be provided. Can have the following values: • Code - measure code value supported by the input symbol, or can be given as Preferred or All. • SegmentCode - code that describes the segment.
ReportingBasis	Determines reporting basis. Can have the following values: • Primary • Parent • Consolidated This is only used when All is specified as the Measure Code. If a specific measure is entered, it will be used to determine the reporting basis. If left blank, and All is specified as the Measure Code, both reporting bases are returned (Parent and Consolidated).
CalculationBasis	Defines calculation basis: Consensus Mean or Smart Estimate. The calculation basis request is to have growth and/or margin values calculated using ConsensusMean or SmartEstimate data. If left blank the calculations will reflect the Mean values.
RelativePeriod	This optional attribute determines the relative period to be returned. Can have the following values: • Type - defines relative period type: Annual, Interim or Monthly. • Number - defines number of periods ahead or before the current period.. Multiple relative periods can be provided. When no period is supplied the default is Annual 0.
FiscalPeriod	This optional attribute determines the fiscal period to be returned. Possible values: • Type - Fiscal period type. Can be: FY, QTR1, QTR2, QTR3, QTR4, SAN1, SAN2, MON1, MON2, MON3, MON4, MON5, MON6, MON7, MON8, MON9, MON10, MON11, MON12. • Year - fiscal year. Multiple fiscal periods can be provided.
SummaryOptions	Defines summary options. • IncludeEstimateSnapshots - true/false. • IncludeFootnotes - true/false. • IncludeInterimPeriodsWithAnnual - true/false. Can only be specified when requesting data for annual period (cant use this & include interim periods). • IncludeLongTermGrowthEstimates - true/false. • IncludePriceTargets - true/false. • IncludePriceTargetSnapshots - true/false. This cannot be specified if Price Targets are not included • IncludeRecommendations - true/false. • IncludeRecommendationSnapshots - true/false. This cannot be specified if Recommendations are not included. • IncludeRecommendationStatistics - true/false. This cannot be specified if Recommendations are not included. • IncludeRevisionStatistics - true/false. • OutputIndustryCodeType - indicates whether to return the Trbc Industry code in the response. • ReturnOnlySurprises - true/false.

The response returns the following data:

XML Sample Response - Retrieving IBES Estimate Summaries

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/GetEstimateSummaries_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetEstimateSummaries_Response_1 xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1">
      <EstimateSummaries xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1_Types">
        <EstimateSummary>
          <Organization>
            <Name>International Business Machines Corp</Name>
            <DisplaySymbol xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/Criteria/Symbol">

```



```

        <DisplayValue>IBM</DisplayValue>
        <Symbol>
          <Type>Ric</Type>
          <Value>IBM.N</Value>
        </Symbol>
      </DisplaySymbol>
    </Industry>
    <Code>
      <Type xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/Criteria/Industry">Trbc</Type>
      <Value xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/Criteria/Industry">0000</Value>
    </Code>
    <Name>UNCLASSIFIED</Name>
  </Industry>
  <ValueFormats>
    <ValueFormat>
      <Type>NonPerShare</Type>
      <Name>Non Per-share</Name>
      <Scale>1000000</Scale>
      <Unit>Money</Unit>
      <CurrencyCode>USD</CurrencyCode>
    </ValueFormat>
    ...
  </ValueFormats>
  <PreferredMeasureCode>EPS</PreferredMeasureCode>
  <PrimaryReportingBasis>Consolidated</PrimaryReportingBasis>
  <HasMultipleReportingBases>false</HasMultipleReportingBases>
  <CountryCode>USA</CountryCode>
  <CountryName>United States</CountryName>
</Organization>
<Measures></Measures>
</EstimateSummary>
</EstimateSummaries>
<CalculationBasis>ConsensusMean</CalculationBasis>
</GetEstimateSummaries_Response_1>
</Body>
</Envelope>

```

The following table lists the parameters returned by response:

Attribute	Description
Organization	The company name and symbol of subject company. Can have the following values: • Name - the organization's name. • Symbol - collection of organization's symbols.
Industry	Provides information on what industries the company is a component of. Can have the following values: • Code - industry code based on TRBC classification. • Name - industry name.
ValueFormats	A collection of value formats one for each measure value type (Per share/Non Per Share/Ratio). Can have the following values: • Type - shows type of value type (per share, non per share or ratio) • Name - name of value format • Scale - scaling factor (e.g.1 or 1000000) • Unit - shows unit type (Money or Percentage) • CurrencyCode - shows currency code for the current value format
PreferredMeasureCode	Shows measure code that is the default for this company.
PrimaryReportingBasis	Shows reporting basis for the company (either Parent or Consolidated).
HasMultipleReportingBases	Indicates whether the company has estimates for both Parent & Consolidated.
CountryCode	Country code in ISO format.
CountryName	Country name.
Measures	Consists of four sections: Measure: Contains the measure details: • Code - 3 or 6 letter measure code



- **Name** - measure long name
- **Abbreviation** - abbreviated measure name
- **IsPreferred** - is it a preferred measure or not
- **Reporting Basis** - Consolidated or Parent
- **Value format** -
 - o Type - NonPerShare, Pershare or Ratio
 - o Name - name of the type
 - o Scale - scaling factor (e.g. 1 or 1000000)
 - o Unit - Money, Percentage
 - o Currency code - like USD, INR etc.
- **Section** - one of the following: Income statement, Cash Flow, Balance Sheet, Valuation. It will be returned for all measures except Recommendation and Target Prices.
- **CalculationFormat** -
 - o Type - Absolute or Percentage for all supported calculation types (year over year etc)
 - o Name - name of the calculation format
 - o Scale - scaling factor
 - o Unit - Money, Percentage
- **Segments** - Only returned for measures where segments available (Pharma, Same Store Sales, etc.)
 - o Code - segment code
 - o Category - segment category
 - o Name - segment name
 - o Abbreviation - segment abbreviation
 - o SubSegments - every segment will have at least one subsegment:
 - ~ Code - subsegment code
 - ~ Category - subsegment category
 - ~ Name - subsegment name
 - ~ Abbreviation - subsegment abbreviation
- **PrecisionDetail** - number of decimal places used to display Detail Estimate data for that company
- **PrecisionSummary** - number of decimal places used to display Summary Estimates data for that company

LongTermGrowthEstimate: Summarizes the Long Term Growth Estimates as below:

- Unverified Mean - mean estimate taking into account all Estimate Revisions that have been submitted by contributors but not yet verified as valid by the IBES Estimates Content Operations Team. This provides what the Mean would be if all data received from contributors is verified.
- PreliminaryMean - mean estimate including all revisions verified by the IBES Estimates Content Operations Team since the last Analytics (SmartEstimate, Predicted Surprise, etc) were created
- Mean - the arithmetic average of all values
- High - the highest value
- Low - the lowest value
- NumberOfEstimates - the number of estimates
- Median - the median of all estimates
- StandardDeviation - the standard deviation of estimates

LongTermGrowthEstimateSnapshots:

- Mean - the arithmetic average of all values
- High - the highest value
- Low - the lowest value
- NumberOfEstimates - the number of estimates
- Median - the median of all estimates
- StandardDeviation - the standard deviation of estimates
- Age (7, 30,60,90 days only)

Period:

- RelativePeriod - it can be any of the below and in respective range.
 - o Annual - ANN-10 to ANN5
 - o Interim - INT-20 To INT20
 - o Monthly - MON-47 To MON12
- Fiscal Period
 - o Type can be: FY, QTR1 - QTR4, SAN1-SAN2, and MON1-MON12
 - o Fiscal Period Year should be between 1990-2030.
- CalendarYear - year
- CalendarMonth - month
- ActualReportDate - actual reported date



	• Actuals - a collection of actual data for each segment/sub-segment: - o Currency code - currency value (for example, USD, CAD) - o Reported - actual value reported - o ReportedDate - date when actual was reported - o Restated - actual value restated - o RestatedDate - date when actual was restated - o PostReport30DayPriceChangePercent - the change in the stock price of the company 30 days after the company reported financial results - o SurprisePercent - surprise percentage for this period/measure, calculated as (actual - mean) / mean - o Surprise60DayPercent - the percentage difference between the actual reported by the company and the mean estimate for that ticker/measure/period 60 days prior to the day of report - o SurpriseMean - the arithmetic average of estimates at the release of earnings to the marketplace, for the fiscal period indicated - o StandardizedUnexpectedEarnings - the standardized unanticipated earnings score, calculated as (actual - mean) / standard deviation of summary estimates - o NumberOfEstimates - number of estimates given - o SegmentCode - segment code - o SubSegmentCode - sub segment code • Estimate - a collection of estimates for each segment/subsegment as applicable. For measures without segment the collection will have only one element. - o CurrencyCode - currency value (for example, USD, CAD) - o UnverifiedMean - the arithmetic average of unverified estimates - o PreliminaryMean - the arithmetic average of preliminary estimates - o Mean - the arithmetic average of estimates - o High - the highest value - o Low - the lowest value - o NumberOfEstimates - the number of estimates - o Median - the median of estimates - o StandardDeviation - the standard deviation of estimates - o Calculations: Type, Value - o PredictedSurprise: Value, Unit, IsSignificant - o SmartEstimate - the Smart Estimate - o SegmentCode - the segment code - o SubSegmentCode - the subsegment code • Estimate Snapshots - A collection of Snapshot summary returned only when requested (support for 7, 30 & 90 days only): - o CurrencyCode - currency value (for example, USD, CAD) - o Mean - the arithmetic average of estimates - o High - the highest value - o Low - the lowest value - o NumberOfEstimates - the number of estimates - o Median - the median of estimates - o Standard Deviation - the standard deviation of estimates - o Age - o Calculations (A collection of calculations like y/y, q/q growth etc.) - Type - Value - o Predicted Surprise snapshot - value, unit - o SmartEstimate - the Smart Estimate - o SegmentCode - the segment code - o SubSegmentCode - the subsegment code • Footnotes: - o Type - one of the three footnote types: Company, Instrument and Estimate-level footnotes - o Subtype - o EntryDate - footnote date - o Subject - All, Current, Previous - o IsSignificant - is significant or not - o Text - footnote text
SummaryPriceTarget	Has the summary price target if requested in the input option: • CurrencyCode - currency code, like USD, INR, etc.



	• UnverifiedMean - the arithmetic average of unverified price targets • PreliminaryMean - the arithmetic average of preliminary price targets • Mean - the arithmetic average of price targets • High - the highest value • Low - the lowest value • NumberOfEstimates - the number of estimates • Median - the median of all price targets • Standard Deviation - the standard deviation of price targets
PriceTargetSnapshots	A collection of Price Target Snapshots from past shall be returned on request: • CurrencyCode - currency code, like USD, INR, etc. • Mean - the arithmetic average of price targets • High - the highest value • Low - the lowest value • NumberOfEstimates - the number of estimates • Median - the median of all price targets • Standard Deviation - the standard deviation of price targets • Age
SummaryRecommendation	This data shall be returned only if the 'include Recommendation' flag is specified in the request. It shall have the following data included: • UnverifiedMean - the arithmetic average of unverified recommendations • PreliminaryMean - the arithmetic average of preliminary recommendations • Mean - the arithmetic average of recommendations • High - the highest value • Low - the lowest value • NumberOfRecommendations - the total number of recommendations • Statistics (only if requested) - Recommendation, NumberOfAnalysts
RecommendationSnapshots	Historical recommendation snapshots as of (7/30/90 days ago), shall be returned when the Include Recommendation Snapshots option is selected in the request. This shall provide attributes as follows: • Mean - the arithmetic average of recommendations • High - the highest value • Low - the lowest value • NumberOfRecommendations - the total number of recommendations • Statistics (only if requested) - Recommendation, NumberOfAnalysts • Age(7, 30,60,90 days only)
CalculationBasis	Indicates if calculations use the ConsensusMean or SmartEstimate values.

17.7 Get Estimate Summaries By Report Date (GetEstimateSummariesByReportDate_1)

Use the GetEstimateSummariesByReportDate_1 method to retrieve Estimates summary data for the list of companies based on report date, period and measure provided.

The following example retrieves estimates summary data according to the specified criteria:

XML Sample Request - Retrieving IBES Estimate Summaries By Report Date

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/EstimatesIBES/EstimatesIBES.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/GetEstimateSummariesByReportDate_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
```



```

<GetEstimateSummariesByReportDate_Request_1 xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1">
  <ReportDateRange>
    <From xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/Criteria/Range">2011-12-01T00:00:00</From>
    <To xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/Criteria/Range">2011-12-03T00:00:00</To>
  </ReportDateRange>
  <Measures xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1_Types">
    <Measure>
      <Code>All</Code>
    </Measure>
  </Measures>
  <ReportingBasis>Primary</ReportingBasis>
  <CalculationBasis xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
  <Pagination xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/Criteria/Pagination">
    <PageNumber>2</PageNumber>
    <RecordsPerPage>2</RecordsPerPage>
  </Pagination>
</GetEstimateSummariesByReportDate_Request_1>
</Body>
</Envelope>

```

The following table lists all the parameters that can be used in the request:

Attribute	Description
ReportDateRange	The date range of the reports to be returned.
Measures	Shows estimates types. Can have the following values: • Code - measure code value supported by the input symbol, or can be given as Preferred or All. • SegmentCode - code that describes the segment.
ReportingBasis	Defines reporting basis: Primary, Parent or Consolidated.
CalculationBasis	Defines calculation basis: Consensus Mean or Smart Estimate.
Pagination	Has PageNumber and RecordsPerPage to view any number of records and at any page No.
SortOrder	Has the following attributes: • SortBy to view results based on any value (Date, Symbol, CompanyName, EventName, and EventType). If absent or set to a value other those listed above, sorting will default to Date. • SortDirection to view results in Ascending/Descending order.
SummaryOptions	Defines summary options. • IncludeEstimateSnapshots - True or False • IncludeFootnotes - True or False • IncludeInterimPeriodsWithAnnual - True or False • IncludeLongTermGrowthEstimates - True or False • IncludePriceTargets - True or False • IncludePriceTargetSnapshots - True or False • IncludeRecommendations - True or False • IncludeRecommendationSnapshots - True or False • IncludeRecommendationStatistics - True or False • IncludeRevisionStatistics - True or False • OutputIndustryCodeType -Indicates whether to return the Trbc Industry code in the response • ReturnOnlySurprises - True or False

The response returns the following information:

XML Sample Response - Retrieving IBES Estimate Summaries By Report Date

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/GetEstimateSummariesByReportDate_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
    </CacheResponse>
  </s:Header>
  <s:Body>
    <GetEstimateSummariesByReportDate_1_Reply>
      <GetEstimateSummariesByReportDate_1_Reply>
        <GetEstimateSummariesByReportDate_1_Reply>
          <GetEstimateSummariesByReportDate_1_Reply>
            <GetEstimateSummariesByReportDate_1_Reply>
              <GetEstimateSummariesByReportDate_1_Reply>
                <GetEstimateSummariesByReportDate_1_Reply>
                  <GetEstimateSummariesByReportDate_1_Reply>
                    <GetEstimateSummariesByReportDate_1_Reply>
                      <GetEstimateSummariesByReportDate_1_Reply>
                        <GetEstimateSummariesByReportDate_1_Reply>
                          <GetEstimateSummariesByReportDate_1_Reply>
                        </GetEstimateSummariesByReportDate_1_Reply>
                      </GetEstimateSummariesByReportDate_1_Reply>
                    </GetEstimateSummariesByReportDate_1_Reply>
                  </GetEstimateSummariesByReportDate_1_Reply>
                </GetEstimateSummariesByReportDate_1_Reply>
              </GetEstimateSummariesByReportDate_1_Reply>
            </GetEstimateSummariesByReportDate_1_Reply>
          </GetEstimateSummariesByReportDate_1_Reply>
        </GetEstimateSummariesByReportDate_1_Reply>
      </GetEstimateSummariesByReportDate_1_Reply>
    </s:Body>
  </s:Envelope>

```



```

<DoNotStore />
</CacheResponse>
<a:RelatesTo>[MessageID]</a:RelatesTo>
</s:Header>
<s:Body>
  <GetEstimateSummariesByReportDate_Response_1 xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1">
    <PaginationResult xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/Criteria/Pagination">
      <PageNumber>2</PageNumber>
      <RecordsOnPage>2</RecordsOnPage>
      <RecordsPerPage>2</RecordsPerPage>
      <TotalRecords>94</TotalRecords>
    </PaginationResult>
    <EstimateSummaries xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/Types">
      <EstimateSummary>
        <Organization>
          <Name>Piscines Desjoyaux SA</Name>
          <DisplaySymbol xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/Criteria/Symbol">
            <DisplayValue>ALPDX.PA</DisplayValue>
            <Symbol>
              <Type>IbesTicker</Type>
              <Value>@PIJ </Value>
            </Symbol>
          </DisplaySymbol>
          <Industry>
            <Code>
              <Type xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/Criteria/Industry">Trbc</Type>
              <Value xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/Criteria/Industry">0000</Value>
            </Code>
            <Name>UNCLASSIFIED</Name>
          </Industry>
          <ValueFormats>
            <ValueFormat>
              <Type>NonPerShare</Type>
              <Name>Non Per-share</Name>
              <Scale>1000000</Scale>
              <Unit>Money</Unit>
              <CurrencyCode>EUR</CurrencyCode>
            </ValueFormat>
            ...
          </ValueFormats>
          <PrimaryReportingBasis>Consolidated</PrimaryReportingBasis>
          <HasMultipleReportingBases>false</HasMultipleReportingBases>
          <CountryCode>FRA</CountryCode>
          <CountryName>France</CountryName>
        </Organization>
        <Measures>
          <Measure>
            <Code>NDT</Code>
            <Name>Net Debt</Name>
            <Abbreviation>NDT</Abbreviation>
            <IsPreferred>false</IsPreferred>
            <ReportingBasis>Consolidated</ReportingBasis>
            <ValueFormat>
              <Type>NonPerShare</Type>
              <Name>Non Per-share</Name>
              <Scale>1000000</Scale>
              <Unit>Money</Unit>
              <CurrencyCode>EUR</CurrencyCode>
            </ValueFormat>
            <Section>Balance Sheet</Section>
            <PrecisionDetail>2</PrecisionDetail>
            <PrecisionSummary>2</PrecisionSummary>
            <Periods>
              <Period>
                <RelativePeriod>
                  <Type>Interim</Type>
                  <Number>0</Number>
                </RelativePeriod>
                <FiscalPeriod>
                  <Type>QTR4</Type>
                  <Year>2011</Year>
                </FiscalPeriod>
                <CalendarYear>2011</CalendarYear>
              </Period>
            </Periods>
          </Measure>
        </Measures>
      </EstimateSummary>
    </EstimateSummaries>
  </GetEstimateSummariesByReportDate_Response_1>

```



```

        <CalendarMonth>8</CalendarMonth>
        <ActualReportDate>2011-12-02T14:53:00</ActualReportDate>
        </Period>
    </Periods>
</Measure>
...
</Measures>
</EstimateSummary>
<EstimateSummary>
...
</EstimateSummary>
</EstimateSummaries>
<CalculationBasis>ConsensusMean</CalculationBasis>
</GetEstimateSummariesByReportDate_Response_1>
</Body>
</Envelope>

```

The following table lists the parameters returned by response:

Attribute	Description
PaginationResult	Allows user to view: • PageNumber - the page number of the current set of data. • RecordsOnPage - the number of records in the current set of data. • RecordsPerPage - the maximum number of records to include in the returned page of results • TotalRecords - the total number of records matching the search criteria.
Organization	The company name and symbol of subject company. Can have the following values: • Name - the organization's name. • Symbol - collection of organization's symbols.
Industry	Provides information on what industries the company is a component of. Can have the following values: • Code - industry code based on TRBC classification. • Name - industry name.
ValueFormats	A collection of value formats, one for each measure value type (Per share/Non Per Share/Ratio). Can have the following values: • Type - shows type of value (per share, non per share or ratio) • Name - name of value format • Scale - scaling factor (e.g. 1 or 1000000) • Unit - shows unit type (Money or Percentage) • CurrencyCode - shows currency code for the current value format
PreferredMeasureCode	Shows measure code that is the default for this company.
PrimaryReportingBasis	Shows reporting basis for the company (either Parent or Consolidated).
HasMultipleReportingBases	Indicates whether the company has estimates for both Parent & Consolidated.
CountryCode	Country code in ISO format.
CountryName	Country name.
Measure	It has the following sections: Measure: Contains the measure detail as described below: • Code - 3 or 6 letter measure code • Name - measure long name • Abbreviation - abbreviated measure name • IsPreferred - is it a preferred measure or not • Reporting Basis - Consolidated or Parent • Value format - - o Type - NonPerShare, Pershare or Ratio - o Name - name of the type - o Scale - scaling factor (i.e. 1 or 1000000) - o Unit - Money, Percentage - o Currency code - like USD, INR etc. • Section - one of the following: Income statement, Cash Flow, Balance Sheet, Valuation. It will be returned for all measures except Recommendation and Target Prices; • CalculationFormats -



- o Type - Absolute or Percentage for all supported calculation types (year over year, etc.)
- o Name - name of the calculation format
- o Scale - scaling factor
- o Unit - Money, Percentage
- Segments - Only returned for measures where segments are available (Pharma, Same Store Sales etc.)
- o Code - segment code
- o Category - segment category
- o Name - segment name
- o Abbreviation - segment abbreviation
- o SubSegments - every segment will have at least one subsegment
 - ~ Code - subsegment code
 - ~ Category - subsegment category
 - ~ Name - subsegment name
 - ~ Abbreviation - subsegment abbreviation.
- PrecisionDetail - number of decimal places used to display Detail Estimate data for that company
- PrecisionSummary - number of decimal places used to display Summary Estimates data for that company

LongTermGrowthEstimate: Provides the LonTermGrowthEstimate details.

- Unverified Mean - mean estimate taking into account all estimate revisions that have been submitted by contributors but not yet verified as valid by the IBES Estimates Content Operations Team. This provides what the mean would be if all data received from contributors is verified.
- PreliminaryMean - mean estimate including all revisions verified by the IBES Estimates Content Operations Team since the last Analytics (SmartEstimate, Predicted Surprise, etc) were created
- Mean - the arithmetic average of all values
- High - the highest value
- Low - the lowest value
- NumberOfEstimates - the number of LTG estimates
- Median - the median of all LTG estimates
- StandardDeviation - the standard deviation of LTG estimates

LongTermGrowthEstimateSnapshot:

- Mean - the arithmetic average of all LTG estimates
- High - the highest value
- Low - the lowest value
- NumberOfEstimates - the number of LTG estimates
- Median - the median of all LTG estimates
- StandardDeviation - the standard deviation of LTG estimates
- Age(7, 30,60,90 days only)

Periods: Gives the detail of which fiscal/relative period the data belongs to. If future period then Estimates values will be returned and if historical periods then Actual values are returned.

Estimate Period:

- RelativePeriod - it can be any of the below and in respective range.
- Annual - ANN-10 to ANN5
- Interim - INT-20 To INT20
- Monthly- MON-47 To MON12
- Fiscal Period:
 - o Type can be: FY,QTR1 - QTR4, SAN1-SAN2, and MON1-MON12
 - o Fiscal Period Year: Should be between 1990-2030.
- CalendarYear - year
- CalendarMonth - month
- ActualReportDate - actual reported date
- Actuals: a collection of actual data for each segment/sub-segment:
 - o Currency code - currency value (for example, USD, CAD)
 - o Reported - actual value reported
 - o ReportedDate - date when actual was reported
 - o Restated - actual value restated
 - o RestatedDate - date when actual was restated
 - o PostReport30DayPriceChangePercent - the change in the stock price of the company 30 days after the company reported financial results
 - o SurprisePercent - surprise percentage for this period/measure, calculated as (actual - mean) / mean



	- o Surprise60DayPercent - the percentage difference between the actual reported by the company and the mean estimate for that ticker/measure/period 60 days prior to the day of report - o SurpriseMean - the arithmetic average of estimates at the release of earnings to the marketplace, for the fiscal period indicated - o StandardizedUnexpectedEarnings - the standardized unanticipated earnings score, calculated as (actual - mean) / standard deviation of summary estimates - o NumberOfEstimates - number of estimates given - o SegmentCode - segment code - o SubSegmentCode - sub segment code • Estimates: a collection of estimates for each segment/subsegment as applicable. For measures without segment the collection will have only one element. - o CurrencyCode - currency value (for example, USD, CAD) - o UnverifiedMean - the arithmetic average of unverified estimates - o PreliminaryMean - the arithmetic average of preliminary estimates - o Mean - the arithmetic average of estimates - o High - the highest value - o Low - the lowest value - o NumberOfEstimates - the number of estimates - o Median - the median of estimates - o StandardDeviation - the standard deviation of estimates - o Calculations: Type, Value - o PredictedSurprise: Value, Unit, IsSignificant - o SmartEstimate - the Smart Estimate - o SegmentCode - the segment code - o SubSegmentCode - the subsegment code - o EstimateSnapshots: A collection of Snapshot summary returned only when requested (7, 30 and 90 days supported): - o CurrencyCode - currency value (for example, USD, CAD) - o Mean - the arithmetic average of estimates - o High - the highest value - o Low - the lowest value - o NumberOfEstimates - the number of estimates - o Median - the median of estimates - o Standard Deviation - the standard deviation of estimates - o Age - o Calculations (A collection of calculations like y/y, q/q growth etc.) - Type - Value - o Predicted Surprise snapshot - value, unit - o SmartEstimate - the Smart Estimate - o SegmentCode - the segment code - o SubSegmentCode - the subsegment code - o Footnotes: - o Type - one of the three footnote types: Company, Instrument and Estimate-level footnotes - o Subtype - o EntryDate - footnote date - o Subject - All, Current, Previous - o IsSignificant - is significant or not - o Text - footnote text
PriceTarget	Has the following values: • CurrencyCode - currency code, like USD, INR, etc. • UnverifiedMean - the arithmetic average of unverified price targets • PreliminaryMean - the arithmetic average of preliminary price targets • Mean - the arithmetic average of price targets • High - the highest value • Low - the lowest value • NumberOfEstimates - the number of estimates • Median - the median of all price targets • Standard Deviation - the standard deviation of price targets
PriceTargetSnapshots	A collection of Price Target Snapshots from past shall be returned on request: • CurrencyCode - currency code, like USD, INR, etc. • Mean - the arithmetic average of price targets



	• High - the highest value • Low - the lowest value • NumberOfEstimates - the number of estimates • Median - the median of all price targets • Standard Deviation - the standard deviation of price targets • Age
Recommendation	This data shall be returned only if the Include Recommendation option is specified in the request. It shall have the following data included: • UnverifiedMean - the arithmetic average of unverified recommendations • PreliminaryMean - the arithmetic average of preliminary recommendations • Mean - the arithmetic average of recommendations • High - the highest value • Low - the lowest value • NumberOfRecommendations - the total number of recommendations • Statistics (only if requested) - Recommendation, NumberOfAnalysts
Recommendation Snapshots	Historical recommendation snapshots as of (7/30/90 days ago), shall be returned when the Include Recommendation Snapshots option is selected in the request. This shall provide attributes as follows: • Mean - the arithmetic average of recommendations • High - the highest value • Low - the lowest value • NumberOfRecommendations - the total number of recommendations • Statistics (only if requested) - Recommendation, NumberOfAnalysts • Age(7, 30,60,90 days only)
CalculationBasis	Indicates if calculations use the ConsensusMean or SmartEstimate values.

17.8 Get Estimate Details By Analyst (GetEstimateDetailsByAnalyst_1)

Use the GetEstimateDetailsByAnalyst_1 method to retrieve Estimates Actual Data of all the companies covered by the given Analyst in the input, if future period is selected as input then Estimates data is returned back else if the selected period is historical then the Actual data for the given period will be returned for all measures/single measure selected.

The following example retrieves estimates data for the specified analyst.

XML Sample Request - Retrieving IBES Estimate Details By Analyst	
<pre> <Envelope xmlns="http://www.w3.org/2003/05/soap-envelope"> <Header> <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/EstimatesIBES/EstimatesIBES.svc</To> <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID> <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/GetEstimateDetailsByAnalyst_1</Action> <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1"> <ApplicationID>[AppID]</ApplicationID> <Token>[Impersonation Token]</Token> </Authorization> </Header> <Body> <GetEstimateDetailsByAnalyst_Request_1 xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1" xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1_Types"> <AnalystCode> <Type>Starmine</Type> <Value>158239</Value> </AnalystCode> <Measures></Measures> <ReportingBasis p4:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:p4="http://www.w3.org/2001/XMLSchema-instance" /> <RelativePeriods> <RelativePeriod> <Type>Annual</est1:Type> <Number>1</est1:Number> </RelativePeriod> </RelativePeriods> </GetEstimateDetailsByAnalyst_Request_1> </Body> </pre>	




```
</Envelope>
```

The following table lists the parameters that you can use in the request:

Attribute	Description
AnalystCode	An analyst code - Starmine Analyst type and value.
Measures	A collection of Measure Criterion (optional input). Can have the following values: • Code -measure code value supported by the input symbol, or can be given as Preferred or All. • SegmentCode - code that describes the segment. If no measure is provided then only the Preferred Measure will be returned.
ReportingBasis	Determines reporting basis. Can have the following values: • Primary • Parent • Consolidated This is only used when All is specified as the Measure Code. If a measure is entered, it will be used to determine the reporting basis. If left blank and All is specified as the Measure Code, both reporting bases are returned (Parent and Consolidated).
RelativePeriods	This optional attribute determines the relative period to be returned. Can have the following values: • Type - defines relative period type: Annual, Interim or Monthly. • Number - defines number of periods ahead or before the current period. Multiple relative periods can be provided. When no period is supplied the default is Annual 0
FiscalPeriods	This optional attribute determines the fiscal period to be returned. Possible values: • Type - Fiscal period type. Can be: FY, QTR1, QTR2, QTR3, QTR4, SAN1, SAN2, MON1, MON2, MON3, MON4, MON5, MON6, MON7, MON8, MON9, MON10, MON11, MON12. • Year - fiscal year. Multiple fiscal periods can be provided.
DetailOptions	The following options are available: • IncludeActuals - when specified the response shall have the actual data as reported by the company. • IncludeBibliography - when specified the response shall include additional reference doc IDs (research). • IncludeFootnotes - when specified the response shall include any foot notes that apply to the estimate, actual or the organization. • IncludeInterimPeriodsWithAnnual - this option should be specified only when requesting details for annul periods. If this is set to true the response shall have data for interim (QTR, SAN) periods as available in the database. • IncludeLongTermGrowthEstimates - when specified and set to true the response will return LongTermGrowth estimates. • IncludePriceTargets - when specified the response will return Price target data for the organization. • IncludeRecommendations - when specified the response will return the broker Recommendation data for the company. • IncludeSummary - when specified a short Summary of the Estimate data will be returned in response. • OutputIndustryCodeType - indicates what Industry code to return in the response. • ReturnOnlyBoldEstimates - will only return details for estimates marked as bold in the Starmine data. Bold estimates are on forward estimates, they are not on reported periods.

XML Sample Response - Retrieving IBES Estimate Details By Analyst

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/
    GetEstimateDetailsByAnalyst_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
```




```

</s:Header>
<s:Body>
  <GetEstimateDetailsByAnalyst_Response_1 xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1">
    <EstimateDetails xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1_Types">
      <EstimateDetail>
        <Organization>
          <Name>Activision Blizzard Inc</Name>
          <DisplaySymbol xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/Criteria/Symbol">
            <DisplayValue>ATVI.O</DisplayValue>
            <Symbol>
              <Type>Ric</Type>
              <Value>ATVI.O</Value>
            </Symbol>
          </DisplaySymbol>
          <Industry>
            <Code>
              <Type xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/Criteria/Industry">Trbc</Type>
              <Value xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/Criteria/Industry">53205010</Value>
            </Code>
            <Name>Toys & Games</Name>
          </Industry>
          <ValueFormats>
            <ValueFormat>
              <Type>NonPerShare</Type>
              <Name>Per-share</Name>
              <Scale>1</Scale>
              <Unit>Money</Unit>
              <CurrencyCode>USD</CurrencyCode>
            </ValueFormat>
          </ValueFormats>
          <PreferredMeasureCode>EPS</PreferredMeasureCode>
          <PrimaryReportingBasis>Consolidated</PrimaryReportingBasis>
          <HasMultipleReportingBases>false</HasMultipleReportingBases>
          <CountryCode>USA</CountryCode>
          <CountryName>United States</CountryName>
        </Organization>
        <Measures>
          <Measure>
            <Code>EPS</Code>
            <Name>EPS</Name>
            <Abbreviation>EPS</Abbreviation>
            <IsPreferred>true</IsPreferred>
            <ReportingBasis>Consolidated</ReportingBasis>
            <ValueFormat>
              <Type>PerShare</Type>
              <Name>Per-share</Name>
              <Scale>1</Scale>
              <Unit>Money</Unit>
              <CurrencyCode>USD</CurrencyCode>
            </ValueFormat>
            <Section>Income Statement</Section>
            <PrecisionDetail>2</PrecisionDetail>
            <PrecisionSummary>3</PrecisionSummary>
            <Periods>
              <Period>
                <RelativePeriod>
                  <Type>Annual</Type>
                  <Number>1</Number>
                </RelativePeriod>
                <FiscalPeriod>
                  <Type>FY</Type>
                  <Year>2011</Year>
                </FiscalPeriod>
                <CalendarYear>2011</CalendarYear>
                <CalendarMonth>12</CalendarMonth>
                <ActualReportDate xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"></ActualReportDate>
              </Period>
            </Periods>
            <Estimates>
              <Estimate>
                <Contributor>
                  <ContribID>11266</ContribID>
                  <Name>WILLIAM BLAIR & COMPANY, L.L.C.</Name>
                  <Analysts>
                    <Analyst>

```



```

        <Code>
          <Type>Starmine</Type>
          <Value>158239</Value>
        </Code>
        <Name>Schackart, Ralph</Name>
        <Rating>
          <Estimate>1</Estimate>
          <Recommendation>3</Recommendation>
          <RecommendationOverall>2</RecommendationOverall>
        </Rating>
      </Analyst>
    </Analysts>
  </Contributor>
  <Unverified xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"></Unverified>
  <Preliminary xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"></Preliminary>
  <Current>0.85000000</Current>
  <Previous>0.77000000</Previous>
  <RevisionDate>2011-11-09T00:00:00</RevisionDate>
  <ReviewDate>2011-11-10T10:20:18.78</ReviewDate>
  <CurrencyCode>USD</CurrencyCode>
  <Summary>
    <UnverifiedMean xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"></UnverifiedMean>
    <PreliminaryMean xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"></PreliminaryMean>
    <Mean xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"></Mean>
    <SmartEstimate xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"></SmartEstimate>
    <PredictedSurprise xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"></PredictedSurprise>
    <PredictedSurpriseIsSignificant>false</PredictedSurpriseIsSignificant>
    <High xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"></High>
    <Low xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"></Low>
  </Summary>
  <IsExcludedFromMean>false</IsExcludedFromMean>
  <EarningsAccuracy>1</EarningsAccuracy>
  <IsBold>false</IsBold>
  <IsSignificant>false</IsSignificant>
  <IsHigh>false</IsHigh>
  <IsLow>true</IsLow>
  <SmartEstimate>
    <Weight>1.63737000</Weight>
  </SmartEstimate>
  <Bibliography></Bibliography>
</Estimate>
</Estimates>
</Period>
...
</Periods>
</Measure>
</Measures>
</EstimateDetail>
...
</EstimateDetails>
</GetEstimateDetailsByAnalyst_Response_1>
</Body>
</Envelope>

```

The following table lists all the parameters returned by the response:

Attribute	Description
Organization	The company name and symbol of subject company. Can have the following values: • Name - the organization's name. • Symbol - the symbol type and value in the request for company events.
Industry	Provides information on what industries the company is a component of. Can have the following values: • Code - industry code based on TRBC classification. • Name - industry name.
ValueFormats	A collection of value formats one for each measure value type (Per share/Non Per Share/Ratio). Can have the following values: • Type - shows type of value (per share, non per share or ratio) • Name - name of value format



	• Scale - scaling factor (e.g. 1 or 1000000) • Unit - shows unit type (Money or Percentage) • CurrencyCode - shows currency code for the current value format
PreferredMeasureCode	Shows measure code that is the default for this company.
PrimaryReportingBasis	Shows reporting basis for the company (either Parent or Consolidated).
HasMultipleReportingBases	Indicates whether the company has estimates for both Parent & Consolidated.
CountryCode	Country code in ISO format.
CountryName	Country name.
Measures	It has three sections here: MeasureBase: Contains the measure detail as described below: • Code - 3 or 6 letter measure code; • Name - measure long name; • Abbreviation - abbreviated measure name; • IsPreferred - is it a preferred measure or not; • Reporting Basis - Consolidated / Parent; • Value format - - o Type - NonPerShare, Pershare or Ratio. - o Name - name of the type - o Scale - scaling factor (i.e. 1 or 1000000) - o Unit - Money, Percentage - o Currency code - like USD, INR etc. • Section - one of the following: Income statement, Cash Flow, Balance Sheet, Valuation. It will be returned for all measures except Recommendation and Target Prices. • Calculation Format: - o Type - Absolute or Percentage for all supported calculation types (year over year etc) - o Name - name of the calculation format - o Scale - scaling factor - o Unit - Money, Percentage - o Segments - Only returned for measures where segments are available (Pharma, Same store sales etc.); - o Code - segment code - o Category - segment category (for example, Pharmaceuticals) - o Name - segment name - o Abbreviation - segment abbreviation - o SubSegments - every segment will have at least one subsegment ~ Code - subsegment code ~ Category - subsegment category ~ Name - subsegment name ~ Abbreviation - subsegment abbreviation • PrecisionDetail - number of decimal places used to display Detail Estimate data for that company • PrecisionSummary - number of decimal places used to display Summary Estimates data for that company LongTermGrowthEstimates It has the LongTermGrowth detail given by each contributor/analyst. • Contributor - Contributor details with analyst if any - o ContribID - o Name - o Analyst (shall only be returned when the caller specifies the Include Analysts set to true) with the following attributes ~ Analyst Code ~ Name ~ Rating - Estimate, Recommendation, RecommendationOverall • Unverified - unverified value • Preliminary - preliminary value • Current - current value • Previous - previous value • RevisionDate - LTG revision date • ReviewDate - reviewed date • Summary - has the summary data for UnverifiedMean, PreliminaryMean and Mean



- IsExcludedFromMean - is excluded from mean or not
- Footnotes -
 - o Type - one of the three footnote types: Company, Instrument and Estimate-level footnotes
 - o Subtype
 - o Entry Date - footnote date
 - o FootnoteSubject - All, Current, Previous
 - o IsSignificant - is significant or not
 - o Text - footnote text
- Bibliography - additional reference doc IDs (research):
 - o UnverifiedDocumentId
 - o PreliminaryDocumentId
 - o CurrentDocumentId
 - o PreviousDocumentId

Periods: Gives the detail of which fiscal/relative period the data belongs to. If future period then Estimates value will be returned and if historical periods then Actual are returned.

Estimate Period:

- RelativePeriod - it can be any of the below and in respective range.
- Annual - ANN-10 to ANN5
- Interim - INT-20 To INT20
- Monthly- MON-47 To MON12
- Fiscal Period:
 - o Type can be: FY,QTR1 - QTR4, SAN1-SAN2, and MON1-MON12
 - o Fiscal Period Year: Should be between 1990-2030.
- CalendarYear - year
- CalendarMonth - month
- ActualReportDate - actual reported date

Actuals - a collection of actual data one for each segment/sub-segment. This data will be returned only for past periods (Where earnings have already been reported). For measures without segment there will be only one element in the collection.

- Currency code - currency value (for example, USD, CAD)
- Reported - actual value reported
- ReportedDate - date when actual was reported
- Restated - actual value restated
- RestatedDate - date when actual was restated
- PostReport30DayPriceChangePercent - the change in the stock price of the company 30 days after the company reported financial results
- SurprisePercent - surprise percentage for this period/measure, calculated as (actual - mean) / mean
- Surprise60DayPercent - the percentage difference between the actual reported by the company and the mean estimate for that ticker/measure/period 60 days prior to the day of report
- SurpriseMean - the arithmetic average of estimates at the release of earnings to the marketplace, for the fiscal period indicated
- StandardizedUnexpectedEarnings - the standardized unanticipated earnings score, calculated as (actual - mean) / standard deviation of summary estimates
- NumberOfEstimates - number of estimates given
- SegmentCode - segment code
- SubSegmentCode - sub segment code

Estimates - has estimate value given by each contributor/analyst if period is future.

- Contributor - Contributor details with analyst if any
 - o ContribID
 - o Name
 - o Analyst (shall only be returned when the caller specifies the Include Analysts set to true) with the following attributes
- Analyst Code
- Name
- Rating - Estimate, Recommendation, RecommendationOverall
- Unverified - unverified value
- Preliminary - preliminary value
- Current - current value
- Previous - previous value
- RevisionDate - revision date



	• ReviewDate - reviewed date • CurrencyCode - like USD, INR etc. • Calculations - Type, Value • Summary - - o UnverifiedMean - mean estimate taking into account all estimate revisions that have been submitted by contributors but not yet verified as valid by the IBES Estimates Content Operations Team. This provides what the mean would be if all data received from contributors is verified. - o PreliminaryMean - mean estimate including all revisions verified by the IBES Estimates Content Operations Team since the last Analytics (SmartEstimate, Predicted Surprise, etc) were created - o Mean - the mean of all estimates included in the summary - o SmartEstimate - the Smart Estimate - o PredictedSurprise - the Predicted Surprise amount - o PredictedSurpriseIsSignificant - whether the Predicted Surprise is significant - o High - the highest estimate included in the summary - o Low - the lowest estimate included in the summary • IsExcludedFromMean - true/false • Footnotes - - o Type - one of the three footnote types: Company, Instrument and Estimate-level footnotes - o Subtype - o Entry Date - footnote date - o FootnoteSubject - All, Current, Previous - o IsSignificant - is significant or not - o Text - footnote text • EarningsAccuracy - value of accuracy of earnings • IsBold - is bold estimate or not • IsSignificant - is significant or not • IsHigh - if High will be true • IsLow - if low will be true • SmartEstimate - - o Weight - the percentage weight that this estimate contributed to the SmartEstimate - o Note - if this estimate was excluded from the SmartEstimate, this field will represent the reason why it was excluded (Outlier, Cluster, Age) • SegmentCode - segment code • SubSegmentCode - subsegment code • Bibliography - - o UnverifiedDocumentId - o PreliminaryDocumentId - o CurrentDocumentId - o PreviousDocumentId Footnotes - • Type - one of the three footnote types: Company, Instrument and Estimate-level footnotes • Subtype • Entry Date - footnote date • FootnoteSubject - All, Current, Previous • IsSignificant - is significant or not • Text - footnote text
PriceTargets	• Contributor - Contributor details with analyst if any - o ContribID - o Name - o Analyst (returned only when Include Analysts is set to true) with the following attributes: ~ Analyst Code ~ Name ~ Rating - Estimate, Recommendation, RecommendationOverall • Unverified - unverified value • Preliminary - preliminary value • Current - current value • Previous - previous value • RevisionDate - revision date • Summary - has the summary data for UnverifiedMean, PreliminaryMean and Mean. • CurrencyCode - like USD, INR etc. • LastClosingPrice - Last closing price



	• DifferencePercent - percentage difference • UnverifiedHorizon - time horizon of the unverified estimate • PreliminaryHorizon - time horizon of the preliminary estimate • CurrentHorizon - time horizon of the current estimate • PreviousHorizon - time horizon of the previous estimate • Bibliography - additional reference doc IDs (research): - o UnverifiedDocumentId - o PreliminaryDocumentId - o CurrentDocumentId - o PreviousDocumentId
Recommendations	• Contributor - Contributor details with analyst if any - o ContribID - o Name - o Analyst (returned only when Include Analysts is set to true) with the following attributes: ~ Analyst Code ~ Name ~ Rating - Estimate, Recommendation, RecommendationOverall • Unverified - unverified value • Preliminary - preliminary value • Current - current value • Previous - previous value • RevisionDate - revision date • ReviewDate - reviewed date • Summary - has the summary data for UnverifiedMean, PreliminaryMean and Mean. • UnverifiedText - unverified text • PreliminaryText - preliminary text • CurrentText - current text • PreviousText - previous text • Bibliography - additional reference doc IDs (research): - o UnverifiedDocumentId - o PreliminaryDocumentId - o CurrentDocumentId - o PreviousDocumentId

17.9 Get Long Term Growth Estimate Detail (GetLongTermGrowthEstimateDetail_1)

You can use the GetLongTermGrowthEstimateDetail_1 request to retrieve long term growth details for a given contributor, symbol, measure.

The following example retrieves long term growth details for IBM.

XML Sample Request - Retrieving Long Term Growth Estimate Detail

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/EstimatesIBES/EstimatesIBES.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/GetLongTermGrowthEstimateDetail_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetLongTermGrowthEstimateDetail_Request_1 xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1">
      <Symbol xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/Criteria/Symbol">
        <Type>Ric</Type>
        <Value>IBM.N</Value>
      </Symbol>
    </GetLongTermGrowthEstimateDetail_Request_1>
  </Body>
</Envelope>
```



```

<Measures xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1_Types">
  <Measure>
    <Code>All</Code>
  </Measure>
</Measures>
<ReportingBasis>Primary</ReportingBasis>
</GetLongTermGrowthEstimateDetail_Request_1>

</Body>
</Envelope>

```

The following table contains the parameters that you use in the request:

Attribute	Description
Symbol	Shows the symbol to request data for. Includes the following values: Type - defines symbol type: - Ibes Ticker - Ric Value - input value for the symbol.
Measures	List of Measure criterion where a single or multiple measures can be provided. Can have the following values: Code -measure code value supported by the input symbol, or can be given as Preferred or All. SegmentCode - code that describes the segment.
ReportingBasis	Determines reporting basis. Can have the following values: Primary Parent Consolidated This is only used when All is specified as the Measure Code. If a measure is entered, it will be used to determine the reporting basis. If left blank and All is specified as the Measure Code, both reporting bases are returned (Parent and Consolidated).
ContribId	Defines contributor ID for which the Estimates Data will be returned only.
IncludeBibliography	Specifies whether the response shall include additional reference doc IDs (research).
IncludeFootnotes	Specifies whether the response shall include any foot notes that apply to the estimate, actual or the organization.
OutputIndustryCodeType	Indicates what Industry code to return in the response.

The response returns the following details:

XML Sample Response - Retrieving Long Term Growth Estimate Detail

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/GetLongTermGrowthEstimateDetail_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetLongTermGrowthEstimateDetail_Response_1 xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1">
      <LongTermGrowthEstimateDetail xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1_Types">
        <Organization>
          <Name>International Business Machines Corp</Name>
          <DisplaySymbol xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/Criteria/Symbol">
            <DisplayValue>IBM</DisplayValue>
            <Symbol>
              <Type>Ric</Type>
              <Value>IBM.N</Value>
            </Symbol>
          </DisplaySymbol>

```



```

<Industry>
  <Code>
    <Type xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/Criteria/Industry">Trbc</Type>
    <Value xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/Criteria/Industry">57201010</Value>
  </Code>
  <Name>IT Services & Consulting</Name>
</Industry>
<ValueFormats>
  <ValueFormat>
    <Type>NonPerShare</Type>
    <Name>Non Per-share</Name>
    <Scale>1000000</Scale>
    <Unit>Money</Unit>
    <CurrencyCode>USD</CurrencyCode>
  </ValueFormat>
  ...
</ValueFormats>
<PreferredMeasureCode>EPS</PreferredMeasureCode>
<PrimaryReportingBasis>Consolidated</PrimaryReportingBasis>
<HasMultipleReportingBases>false</HasMultipleReportingBases>
<CountryCode>USA</CountryCode>
<CountryName>United States</CountryName>
</Organization>
<Measures>
  <Measure>
    <Code>BPS</Code>
    <Name>Book Value per Share</Name>
    <Abbreviation>BPS</Abbreviation>
    <IsPreferred>false</IsPreferred>
    <ReportingBasis>Consolidated</ReportingBasis>
    <ValueFormat>
      <Type>PerShare</Type>
      <Name>Per-share</Name>
      <Scale>1</Scale>
      <Unit>Money</Unit>
      <CurrencyCode>USD</CurrencyCode>
    </ValueFormat>
    <Section>Balance Sheet</Section>
    <PrecisionDetail>2</PrecisionDetail>
    <PrecisionSummary>3</PrecisionSummary>
  </Measure>
  ...
</Measures>
</LongTermGrowthEstimateDetail>
</GetLongTermGrowthEstimateDetail_Response_1>
</Body>
</Envelope>

```

The following table lists the parameters returned by response:

Attribute	Description
Organization	The company name and symbol of subject company. Can have the following values: • Name - the organization's name. • Symbol - the symbol type and value in the request for company events.
Industry	Provides information on what industries the company is a component of. Can have the following values: • Code - industry code based on TRBC classification. • Name - industry name.
ValueFormats	A collection of value formats one for each measure value type (Per share/Non Per Share/Ratio). Can have the following values: • Type - shows type of value (per share, non per share or ratio). • Name - name of value format. • Scale - scaling factor (i.e. 1 or 1000000) • Unit - shows unit type (Money, Percentage). • CurrencyCode - shows currency code for the current value format.
PreferredMeasureCode	Shows measure code that is the default for this company.
PrimaryReportingBasis	Shows reporting basis for the company (either Parent or Consolidated).



HasMultipleReportingBases	Indicates whether the company has estimates for both Parent & Consolidated.
CountryCode	Country code in ISO format.
CountryName	Country name.
Measure	It has the following sections: Measure: Contains the measure details as described below: • Code - 3 or 6 letter measure code • Name - measure long name • Abbreviation - abbreviated measure name • IsPreferred - is it a preferred measure or not • Reporting Basis - Consolidated or Parent • Value format - - o Type - NonPerShare, Pershare or Ratio - o Name - name of the type - o Scale - scaling factor (e.g. 1 or 1000000) - o Unit - Money, Percentage - o Currency code - like USD, INR etc. • Section - one of the following: Income statement, Cash Flow, Balance Sheet, Valuation. It will be returned for all measures except Recommendation and Target Prices; • Calculation Formats - - o Type - Absolute or Percentage for all supported Calculation types (year over year etc) - o Name - name of the calculation format - o Scale - scaling factor - o Unit - Money, Percentage • Segments - Only returned for measures where segments are available (Pharma, Same Store Sales, etc.): - o Code - segment code - o Category - segment category - o Name - segment name - o Abbreviation - segment abbreviation - o SubSegments - every segment will have at least 1 subsegment ~ Code - subsegment code ~ Category - subsegment category ~ Name - subsegment name ~ Abbreviation - subsegment abbreviation • PrecisionDetail - number of decimal places used to display Detail Estimate data for that company • PrecisionSummary - number of decimal places used to display Summary Estimates data for that company LongTermGrowthEstimates: It has the LonTermGrowth details given by each contributor/analyst. • Contributor - Contributor details with analyst if any - o ContribID - o Name - o Analyst (shall only be returned when the caller specifies the Include Analysts set to true) with the following attributes ~ Analyst Code ~ Name ~ Rating - Estimate, Recommendation, RecommendationOverall • Unverified - unverified value • Preliminary - preliminary value • Current - current value • Previous - previous value • RevisionDate - LTG revision date • ReviewDate - reviewed date • Summary - has the summary data for UnverifiedMean, PreliminaryMean and Mean • IsExcludedFromMean - is excluded from mean or not • Footnotes - - o Type - one of the three footnote types: Company, Instrument and Estimate-level footnotes - o Subtype - o Entry Date - footnote date - o FootnoteSubject - All, Current, Previous - o IsSignificant - is significant or not - o Text - footnote text



- Bibliography - additional reference doc IDs (research):
 - o UnverifiedDocumentId
 - o PreliminaryDocumentId
 - o CurrentDocumentId
 - o PreviousDocumentId

17.10 Get Long Term Growth Estimate Summaries (GetLongTermGrowthEstimateSummaries_1)

Use the GetLongTermGrowthEstimateSummaries_1 request to get long term growth summaries for a given symbol and measure.

The following example requests long term growth summaries for IBM:

XML Sample Request - Retrieving Long Term Growth Estimate Summaries

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/EstimatesIBES/EstimatesIBES.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/GetLongTermGrowthEstimateSummaries_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetLongTermGrowthEstimateSummaries_Request_1 xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1"
      xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/Criteria/Symbol">
      <Symbols>
        <Symbol>
          <Type>Ric</sym:Type>
          <Value>IBM.N</sym:Value>
        </Symbol>
      </Symbols>
      <Measures xmlns:est1="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1_Types" />
      <ReportingBasis p3:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:p3="http://www.w3.org/2001/XMLSchema-instance" />
    </GetLongTermGrowthEstimateSummaries_Request_1>
  </Body>
</Envelope>
```

The following table lists the parameters available for this request:

Attribute	Description
Symbol	Shows the symbol(s) to request data for. Includes the following values: • Type - defines symbol type: - o Ibex Ticker - o Ric • Value - input value for the symbol.
Measures	List of Measure criterion where a single or multiple measures can be provided. Can have the following values: • Code -measure code value supported by the input symbol, or can be given as Preferred or All. • SegmentCode - code that describes the segment.
ReportingBasis	Determines reporting basis. Can have the following values: • Primary • Parent • Consolidated This is only used when All is specified as the Measure Code. If a measure is entered, it will be used to determine the reporting basis. If left blank and All is specified as the Measure Code, both reporting bases are



	returned (Parent and Consolidated).
IncludeSnapshots	Indicates if the response has to return the Snapshots.
IncludeRevisionStatistics	Indicates if the response has to return the Revision Statistics.
OutputIndustryCodeType	Indicates whether to return the Trbc industry code in the response.

The response returns the following data:

XML Sample Response - Retrieving Long Term Growth Estimate Summaries

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/
    GetLongTermGrowthEstimateDetail_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetLongTermGrowthEstimateSummaries_Response_1 xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/
    EstimatesIBES_1">
      <LongTermGrowthEstimateSummaries xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1_Types">
        <LongTermGrowthEstimateSummary>
          <Organization>
            <Name>International Business Machines Corp</Name>
            <DisplaySymbol xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/Criteria/Symbol">
              <DisplayValue>IBM</DisplayValue>
              <Symbol>
                <Type>Ric</Type>
                <Value>IBM.N</Value>
              </Symbol>
            </DisplaySymbol>
            <Industry>
              <Code>
                <Type xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/Criteria/Industry">Trbc</
                Type>
                <Value xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/Criteria/
                Industry">57201010</Value>
              </Code>
              <Name>IT Services & Consulting</Name>
            </Industry>
            <ValueFormats>
              <ValueFormat>
                <Type>NonPerShare</Type>
                <Name>Per-share</Name>
                <Scale>1</Scale>
                <Unit>Money</Unit>
                <CurrencyCode>USD</CurrencyCode>
              </ValueFormat>
            </ValueFormats>
            <PreferredMeasureCode>EPS</PreferredMeasureCode>
            <PrimaryReportingBasis>Consolidated</PrimaryReportingBasis>
            <HasMultipleReportingBases>false</HasMultipleReportingBases>
            <CountryCode>USA</CountryCode>
            <CountryName>United States</CountryName>
          </Organization>
          <Measures>
            <Measure>
              <Code>EPS</Code>
              <Name>EPS</Name>
              <Abbreviation>EPS</Abbreviation>
              <IsPreferred>true</IsPreferred>
              <ReportingBasis>Consolidated</ReportingBasis>
              <ValueFormat>
                <Type>PerShare</Type>
                <Name>Per-share</Name>
              </ValueFormat>
            </Measure>
          </Measures>
        </LongTermGrowthEstimateSummary>
      </LongTermGrowthEstimateSummaries>
    </GetLongTermGrowthEstimateSummaries_Response_1>
  </s:Body>
</s:Envelope>
```



```

        <Scale>1</Scale>
        <Unit>Money</Unit>
        <CurrencyCode>USD</CurrencyCode>
    </ValueFormat>
    <Section>Income Statement</Section>
    <PrecisionDetail>2</PrecisionDetail>
    <PrecisionSummary>3</PrecisionSummary>
    <LongTermGrowthEstimate>
        <UnverifiedMean xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"></UnverifiedMean>
        <PreliminaryMean xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"></PreliminaryMean>
        <Mean>11.01250000</Mean>
        <High>15.00000000</High>
        <Low>8.40000000</Low>
        <NumberOfEstimates>8</NumberOfEstimates>
        <Median>10.35000000</Median>
        <StandardDeviation>1.99459090</StandardDeviation>
    </LongTermGrowthEstimate>
    </Measure>
</Measures>
</LongTermGrowthEstimateSummary>
</LongTermGrowthEstimateSummaries>
</GetLongTermGrowthEstimateSummaries_Response_1>
</Body>
</Envelope>

```

The following table lists the parameters returned by response:

Attribute	Description
Organization	The company name and symbol of subject company. Can have the following values: • Name - the organization's name. • Symbol - the symbol type and value in the request for company events.
Industry	Provides information on what industries the company is a component of. Can have the following values: • Code - industry code based on TRBC classification. • Name - industry name.
ValueFormats	A collection of value formats, one for each measure value type (Per share/Non Per Share/Ratio). Can have the following values: • Type - shows type of value type (per share, non per share or ratio) • Name - name of value format • Scale - quantitative measure (i.e. 1 or 1000000) • Unit - shows unit type • CurrencyCode - shows currency code for the current value format
PreferredMeasureCode	Shows measure code that is the default for this company.
PrimaryReportingBasis	Shows reporting basis for the company (either Parent or Consolidated).
HasMultipleReportingBases	Indicates whether the company has estimates for both Parent & Consolidated.
CountryCode	Country code in ISO format.
CountryName	Country name.
Measures	Consists of the following sections: Measure: Contains the measure details as described below: • Code - 3 or 6 letter measure code • Name - measure long name • Abbreviation - abbreviated measure name • IsPreferred - is it a preferred measure or not • Reporting Basis - Consolidated or Parent • Value format - - o Type - NonPerShare, Pershare or Ratio - o Name - name of the type - o Scale - scaling factor (e.g. 1 or 1000000) - o Unit - Money, Percentage - o Currency code - like USD, INR etc. • Section - one of the following: Income statement, Cash Flow, Balance Sheet, Valuation. It will be returned for all measures except Recommendation and Target Prices;



- Calculation Formats -
 - o Type - Absolute or Percentage for all supported Calculation types (year over year, etc.)
 - o Name - name of the calculation format
 - o Scale - scaling factor
 - o Unit - Money, Percentage
- Segments - Only returned for measures where segments are available (Pharma, Same store sales etc.):
 - o Code - segment code
 - o Category - segment category
 - o Name - segment name
 - o Abbreviation - segment abbreviation
 - o SubSegments - every segment will have at least 1 subsegment
 - ~ Code - subsegment code
 - ~ Category - subsegment category
 - ~ Name -subsegment name
 - ~ Abbreviation - subsegment abbreviation
- PrecisionDetail - number of decimal places used to display Detail Estimate data for that company
- PrecisionSummary - number of decimal places used to display Summary Estimates data for that company

LongTermGrowthEstimate: Summarizes the Long Term Growth Estimates as below:

- Unverified Mean - mean estimate taking into account all estimate revisions that have been submitted by contributors but not yet verified as valid by the IBES Estimates Content Operations Team. This provides what the mean would be if all data received from contributors is verified.
- PreliminaryMean - mean estimate including all revisions verified by the IBES Estimates Content Operations Team since the last Analytics (SmartEstimate, Predicted Surprise, etc) were created
- Mean - the arithmetic average of all LTG estimates
- High - the highest value
- Low - the lowest value
- NumberOfEstimates - the number of LTG estimates
- Median - the median of all LTG estimates
- StandardDeviation - the standard deviation of LTG estimates

LongTermGrowthEstimateSnapshots:

- Mean - the arithmetic average of all LTG estimates
- High - the highest value
- Low - the lowest value
- NumberOfEstimates - the number of LTG estimates
- Median - the median of all LTG estimates
- StandardDeviation - the standard deviation of LTG estimates
- Age (7, 30,60,90 days only)

17.11 Get Recommendation Detail (GetRecommendationDetail_1)

Use the GetRecommendationDetail_1 request to retrieve recommendation and price target detail for the specified symbol and contributor.

The following example retrieves recommendation details for IBM.

XML Sample Request - Retrieving IBES Recommendation Detail

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/EstimatesIBES/EstimatesIBES.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/GetRecommendationDetail_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
```



```

<Body>
  <GetRecommendationDetail_Request_1 xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1">
    <Symbol xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/Criteria/Symbol">
      <Type>Ric</Type>
      <Value>IBM.N</Value>
    </Symbol>
  </GetRecommendationDetail_Request_1>
</Body>
</Envelope>

```

The following table lists the parameters for this request:

Attribute	Description
Symbol	Shows symbol for which the coverage has to be returned. Includes the following values: Type - defines symbol type. The following types are supported: - Ibes Ticker - Ric Value - input value for the symbol.
ContribId	Defines contributor ID for which the data will be returned only.
IncludePriceTargets	Indicates if the response has to return the Price Targets.
OutputIndustryCodeType	Indicates whether to return the Trbc industry code in the response.

The response returns the following data:

XML Sample Response - Retrieving IBES Recommendation Detail

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/GetRecommendationDetail_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetRecommendationDetail_Response_1 xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1">
      <RecommendationDetail xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/Types">
        <Organization>
          <Name>International Business Machines Corp</Name>
          <DisplaySymbol xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/Criteria/Symbol">
            <DisplayValue>IBM</DisplayValue>
            <Symbol>
              <Type>Ric</Type>
              <Value>IBM.N</Value>
            </Symbol>
          </DisplaySymbol>
          <Industry>
            <Code>
              <Type xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/Criteria/Industry">Trbc</Type>
              <Value xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/Criteria/Industry">57201010</Value>
            </Code>
            <Name>IT Services & Consulting</Name>
          </Industry>
          <PreferredMeasureCode>EPS</PreferredMeasureCode>
          <PrimaryReportingBasis>Consolidated</PrimaryReportingBasis>
          <HasMultipleReportingBases>false</HasMultipleReportingBases>
          <CountryCode>USA</CountryCode>
          <CountryName>United States</CountryName>
        </Organization>
        <PriceTargets></PriceTargets>
        <Recommendations>

```



```

<Recommendation>
  <Contributor>
    <ContribID>9584</ContribID>
    <Name>PERMISSION_DENIED</Name>
    <Analysts>
      <Analyst>
        <Code>
          <Type>Starmine</Type>
          <Value>78377</Value>
        </Code>
        <Name>Kelleher, Jim</Name>
        <Rating>
          <Estimate>2</Estimate>
          <Recommendation>4</Recommendation>
          <RecommendationOverall>2</RecommendationOverall>
        </Rating>
      </Analyst>
    </Analysts>
  </Contributor>
  <Unverified xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"></Unverified>
  <Preliminary xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"></Preliminary>
  <Current>1</Current>
  <Previous xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"></Previous>
  <RevisionDate>2003-05-02T09:13:27</RevisionDate>
  <ReviewDate>2011-12-26T23:15:08.77</ReviewDate>
  <Summary>
    <UnverifiedMean>2.32142857</UnverifiedMean>
    <PreliminaryMean>2.32142857</PreliminaryMean>
    <Mean>2.32142857</Mean>
  </Summary>
  <CurrentText>BUY</CurrentText>
  <Bibliography></Bibliography>
</Recommendation>
...
</Recommendations>
</RecommendationDetail>
</GetRecommendationDetail_Response_1>
</Body>
</Envelope>

```

The following table lists the parameters returned by response:

Attribute	Description
Organization	The company name and symbol of subject company. Can have the following values: • Name - the organization's name. • Symbol - the symbol type and value in the request for company events.
Industry	Provides information on what industries the company is a component of. Can have the following values: • Code - industry code based on TRBC classification. • Name - industry name.
ValueFormats	A collection of value formats one for each measure value type (Per share/Non Per Share/Ratio). Can have the following values: • Type - shows type of value (per share, non per share or ratio) • Name - name of value format • Scale - scaling factor (e.g. 1 or 1000000) • Unit - shows unit type (Money or Percentage) • CurrencyCode - shows currency code for the current value format
PreferredMeasureCode	Shows measure code that is the default for this company.
PrimaryReportingBasis	Shows reporting basis for the company (either Parent or Consolidated).
HasMultipleReportingBases	Indicates whether the company has estimates for both Parent & Consolidated.
CountryCode	Country code in ISO format.
CountryName	Country name.
PriceTargets	• Contributor: - o A collection of Contributor Object with ContribID - contributor ID and Name - contributor name



	(if available). - o A collection of Analyst (returned only when Include Analysts is set to true) with the following attributes - Analyst Code, Name and Rating (Estimate, Recommendation, RecommendationOverall). • Unverified - unverified value • Preliminary - preliminary value • Current - current value • Previous - previous value • RevisionDate - revision date • Summary - has the summary data for UnverifiedMean, PreliminaryMean and Mean • CurrencyCode - like USD, INR etc. • LastClosingPrice - Last closing price • DifferencePercent - percentage difference • UnverifiedHorizon - time horizon of the unverified estimate • PreliminaryHorizon - time horizon of the preliminary estimate • CurrentHorizon - time horizon of the current estimate • PreviousHorizon - time horizon of the previous estimate • Bibliography - additional reference doc IDs (research): - o UnverifiedDocumentId - o PreliminaryDocumentId - o CurrentDocumentId - o PreviousDocumentId
Recommendation	• Contributor: - o A collection of Contributor Object with ContribID - contributor ID and Name - contributor name (if available). - o A collection of Analyst (shall only be returned when the Include Analysts is set to true) with the following attributes: Analyst Code, Name and Rating (Estimate, Recommendation, RecommendationOverall). • Unverified - unverified value • Preliminary - preliminary value • Current - current value • Previous - previous value • RevisionDate - revision date • ReviewDate - reviewed date • Summary - has the summary data for UnverifiedMean, PreliminaryMean and Mean. • UnverifiedText - unverified text • PreliminaryText - preliminary text • CurrentText - current text • PreviousText - previous text • Bibliography -- additional reference doc IDs (research): - o UnverifiedDocumentId - o PreliminaryDocumentId - o CurrentDocumentId - o PreviousDocumentId

17.12 Get Recommendation Summaries (GetRecommendationSummaries_1)

The GetRecommendationSummaries_1 request is used to retrieve recommendation and price target summaries for the given symbol.

The following examples requests recommendations summaries for IBM.

XML Sample Request - Retrieving IBES Recommendation Summaries

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/EstimatesIBES/EstimatesIBES.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
```




```

<Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/
GetRecommendationSummaries_1</Action>
<Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
  <ApplicationID>[AppID]</ApplicationID>
  <Token>[Impersonation Token]</Token>
</Authorization>
</Header>
<Body>
  <GetRecommendationSummaries_Request_1 xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1">
    <Symbols xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/Criteria/Symbol">
      <Symbol>
        <Type>Ric</Type>
        <Value>IBM.N</Value>
      </Symbol>
    </Symbols>
  </GetRecommendationSummaries_Request_1>
</Body>
</Envelope>

```

The following table lists the parameters for this request:

Attribute	Description
Symbols	Shows the symbol(s) to request data for. Includes the following values: • Type - defines symbol type: - o Ibex Ticker - o Ric • Value - input value for the symbol.
RecommendationOptions	The following options can be provided: • Include Price Targets - No Price Targets in response when not specified • Include Price Target Snapshots (7 day ago, 1 month ago etc.) - No Price Targets snapshots in response when not specified. Also this cannot be specified if Price Targets are not included • Include Recommendation Statistics (number of records at each record level, mean, media,n etc.) - No Recommendation statistics in response when not specified. • Include Recommendation Snapshots - No Recommendation snapshots in response when not specified. • Output Industry Code Type - whether to return the Trbc industry code in the response.

The response returns the following information:

XML Sample Response - Retrieving IBES Recommendation Summaries

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/
    GetRecommendationSummaries_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetRecommendationSummaries_Response_1 xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1">
      <RecommendationSummaries xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1_Types">
        <RecommendationSummary>
          <Organization>
            <Name>International Business Machines Corp</Name>
            <DisplaySymbol xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/Criteria/Symbol">
              <DisplayValue>IBM</DisplayValue>
            </DisplaySymbol>
            <Symbol>
              <Type>Ric</Type>
              <Value>IBM.N</Value>
            </Symbol>
          </Organization>
          <Industry>
            <Code>

```



```

<Type xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/Criteria/Industry">Trbc</
Type>
<Value xmlns="http://www.reuters.com/ns/2011/12/02/webservices/rkd/EstimatesIBES_1/Criteria/Industry">0000</
Value>
</Code>
<Name>UNCLASSIFIED</Name>
</Industry>
<PreferredMeasureCode>EPS</PreferredMeasureCode>
<PrimaryReportingBasis>Consolidated</PrimaryReportingBasis>
<HasMultipleReportingBases>false</HasMultipleReportingBases>
<CountryCode>USA</CountryCode>
<CountryName>United States</CountryName>
</Organization>
<Recommendation>
  <UnverifiedMean>2.32142857</UnverifiedMean>
  <PreliminaryMean>2.32142857</PreliminaryMean>
  <Mean>2.32142857</Mean>
  <High>1</High>
  <Low>3</Low>
  <NumberOfRecommendations>28</NumberOfRecommendations>
</Recommendation>
</RecommendationSummary>
</RecommendationSummaries>
</GetRecommendationSummaries_Response_1>
</Body>
</Envelope>

```

The following table lists the parameters returned by response:

Attribute	Description
Organization	The company name and symbol of subject company. Can have the following values: • Name - the organization's name. • Symbol - the symbol type and value in the request for company events.
Industry	Provides information on what industries the company is a component of. Can have the following values: • Code - industry code based on TRBC classification. • Name - industry name.
ValueFormats	A collection of value formats one for each measure value type (Per share/Non Per Share/Ratio). Can have the following values: • Type - shows type of value (per share, non per share or ratio) • Name - name of value format • Scale - scaling factor (e.g. 1 or 1000000) • Unit - shows unit type (Money or Percentage) • CurrencyCode - shows currency code for the current value format
PreferredMeasureCode	Shows measure code that is the default for this company.
PrimaryReportingBasis	Shows reporting basis for the company (either Parent or Consolidated).
HasMultipleReportingBases	Indicates whether the company has estimates for both Parent & Consolidated.
CountryCode	Country code in ISO format.
CountryName	Country name.
PriceTarget	• CurrencyCode - currency code, like USD, INR, etc. • UnverifiedMean - the arithmetic average of unverified price targets • PreliminaryMean - the arithmetic average of preliminary price targets • Mean - the arithmetic average of price targets • High - the highest value • Low - the lowest value • NumberOfEstimates - the number of estimates • Median - the median of all price targets • Standard Deviation - the standard deviation of price targets
PriceTargetSnapshot	A collection of Price Target Snapshots from past shall be returned on request: • CurrencyCode - currency code, like USD, INR, etc. • Mean - the arithmetic average of price targets



	• High - the highest value • Low - the lowest value • NumberOfEstimates - the number of estimates • Median - the median of all price targets • Standard Deviation - the standard deviation of price targets • Age
Recommendation	• UnverifiedMean - the arithmetic average of unverified recommendations • PreliminaryMean - the arithmetic average of preliminary recommendations • Mean - the arithmetic average of recommendations • High - the highest value • Low - the lowest value • NumberOfRecommendations - the total number of recommendations • Statistics: - o Recommendation - o NumberOfAnalysts • Standard Deviation - the standard deviation of recommendations
Recommendation Snapshot	• Mean - the arithmetic average of recommendations • High - the highest value • Low - the lowest value • NumberOfRecommendations - the total number of recommendations • Statistics: - o Recommendation - o NumberOfAnalysts • Age



chapter 18 File Content Retrieval

The File Content Retrieval service returns the content of the requested file as the response. The service can be used when you need to display a message that is independent of user entitlements like "Privacy Policy" or "End User Agreement".

18.1 Authentication and Authorization

Authorization

All requests to the TRKD API require an authorization token. For details, see section Understanding Authentication Tokens.

Authentication

TRKD API uses Reuters impersonation tokens for each effective user. In this case, Thomson Reuters must create each user before your application authenticates them. Unmanaged effective users are not supported in TRKD API.

See section Creating a Token for more information.

18.2 File Content Retrieval (RetrieveFileContent_1)

The RetrieveFileContent_1 is a special type of service. Requests to this service are made via HTTP GET, request parameters are passed in URL, authentication information is passed in HTTP cookies. The service returns the content of the requested file as the response.

The following example retrieves the content of the 'eua.txt' file:

HTTP Sample Request - Retrieving File Content
<code>http://api.rkd.reuters.com/api/FileContentRetrieval/FileContentRetrieval.svc/files/en-us/eua.txt</code>
<code>Cookie: RkdAppId= [AppID]; RkdToken=[RkdToken]</code>
HTTP Sample Response - Retrieving File Content
<code>HTTP/1.1 200 OK</code>
<code>Content-Disposition: inline; filename=eua.txt</code>
<code>Content-Title: eua.txt</code>
<code>Content-Length: 15520</code>
<code>Cache-Control: public, must-revalidate, max-age=0</code>
<code>Content-Type: text/html</code>
<code>Date: Tue, 25 Mar 2008 15:36:22 GMT</code>
<code>Expires: Tue, 25 Mar 2008 15:36:22 GMT</code>
<code>ETag: http://api.rkd.reuters.com/api/FileContentRetrieval/FileContentRetrieval.svc/files/en-us/eua.txt Tue, 18 Mar 2008 12:44:16 GMT</code>
<code>Last-Modified: Tue, 18 Mar 2008 17:44:16 GMT</code>
<code>Server: Microsoft-IIS/6.0</code>
<code>X-AspNet-Version: 2.0.50727</code>
<code>X-Powered-By: ASP.NET</code>

18.3 Error Handling

If the file does not exist, the response returns HTTP status 401.



The service logs the errors in the following HTTP headers:

- **RkdFaultCode**: the EventID full name
- **RkdFaultReason**: exception message
- **ClientErrorReference**: unique error reference number

Please check HTTP headers to find the cause of errors.



chapter 19 Filings Retrieval

The Filings Retrieval service retrieves a whole document or a part of a document, with or without conversion. To retrieve document content, you need to specify Reuters document ID (docID) otherwise referred to as commonID.

To find out docIDs, use Filings Search methods.

19.1 Authentication and Authorization

Authorization

All requests to the TRKD API require an authorization token. For details, see section Understanding Authentication Tokens.

Authentication

TRKD API uses Reuters impersonation tokens for each effective user. In this case, Thomson Reuters must create each user before your application authenticates them. Unmanaged effective users are not supported in TRKD API.

For more information on creating a Service Token, see section Creating a Token.

19.2 Get Filing (GetFiling_1)

The GetFiling_1 is a special type of service. Requests to this service are made via HTTP GET, request parameters are passed in URL, authentication information is passed in HTTP cookies. The service returns the content of the requested file as the response.

The following example retrieves part 2 of the PDF document with Reuters document ID 2637295:

HTTP Sample Request - Retrieving Filing

```
http://api.rkd.reuters.com/api/FilingsRetrieval/FilingsRetrieval.svc/?docid=2637295&fileType=PDF&part=2
```

```
Cookie: RkdAppId= [AppID]; RkdToken=[RkdToken]
```

The response returns the URL to the requested PDF document.

There are three input parameters in GetFiling_1 operation:

Attribute	Description
docID	ID of the document to be retrieved. Required parameter. To get docIDs, use Filings Search methods.
fileType	File format. The following types are supported: • XML • PDF • PDF_HEADER • HTML • HTML_IMAGES • HTML_HEADER • HTML_ALL • IMAGE • TEXT • RAW • XBRL • ANY Required parameter.
part	You can use this optional parameter to download a specific part of a document. This option is available only for EDGAR library documents. For details see section Retrieving Part of Document.



You can also convert an EDGAR document (or part of it) to another format. To do so, specify the needed format in the fileType attribute. The table below shows the possible conversion formats for these documents.

Original Format	Possible Conversions
PDF	No conversion; retrieved as PDF
HTML	HTML, HTML_IMAGE, HTML_ALL, PDF, TEXT, RAW
XML	XML, HTML, PDF, HTML_IMAGE, HTML_ALL, TEXT, RAW
IMAGE	IMAGE, PDF
TEXT	TEXT, HTML, PDF, HTML_IMAGE, HTML_ALL, RAW

19.3 Retrieving Part of Document

It is possible to retrieve a part of a document, if the document belongs to the EDGAR library. Perform the following steps:

1. To find the document you want, retrieve its commonID (docID) using one of the following Filings Search methods:
 - SearchSubmissions_1
 - SearchEdgar_1
 - SearchEdgarByAccessionNum_1
 - SearchEdgarUniqueCompanyInfo_1
2. To get a list of all parts the document consists of, do a GetFilingIndex_1 request specifying the CommonID. For details, see section Get Filing Index (GetFilingIndex_1). You can determine the part number from GetFilingIndex based on the position of the part in the parts section. Parts numbering starts with 0 which, in most cases, is the base document.
3. To download this part, use GetFiling_1 operation specifying the index (from 0) in the <part> parameter. For details, see section Get Filing (GetFiling_1).



chapter 20 Filings Search

The Filings Search service provides online access to uploaded documents concerning specific companies.

Documents are added to each library via two methods: manual (CRIS and ImageBase) and automated (EDGAR) contribution.

There are two ways the search for Filings can be conducted:

- Global Filings - to search documents from any libraries for companies available in Reuters mDNA and assigned an MXID. Global Filings contains the following methods:
 - o Search Submissions
 - o Get Categories

Note: Reuters mDNA (Market Data Normalization Application), is a data reference management product. This database aggregates complete global data on exchange tickers, vendor symbols, and cross-reference numbers for issuers and the securities they issue.

- EDGAR Filings - to search EDGAR Filings only. It is useful if the companies searched for were not assigned an MXID or more in-depth information is required. EDGAR Filings contains the following methods:
 - o Get CIK by Company Name
 - o Get Company Info
 - o Get Filing Index
 - o Get Form Types Edgar
 - o Search CRIS
 - o Search Edgar
 - o Search Edgar by Accession Number
 - o Search Edgar Unique Company Info
 - o Search ImageBase

20.1 Authentication/Authorization, Service Endpoint, and Required Headers

Authorization

All requests to the Thomson Reuters Filings Search web service require an authorization token. For details, see section Understanding Authentication Tokens.

Authentication

Thomson Reuters Filings Search uses Reuters impersonation tokens for each effective user. In this case, Thomson Reuters must create each user before your application authenticates them. Unmanaged effective users are not supported in Reuters Estimates.

For additional information, see section Creating a Token.

Service Endpoint

Reuters Estimates Endpoint

<http://api.rkd.reuters.com/api/FilingsSearch/FilingsSearch.svc>

Required Header

Required HTTP Headers

POST /api/FilingsSearch/FilingsSearch.svc HTTP/1.1
 Content-Type: application/soap+xml
 Host: api.rkd.reuters.com
 Content-Length: [length]



20.2 WSDL

WSDL:

http://api.rkd.reuters.com/schemas/FilingsSearch/wsdl/FilingsSearch_1_HttpAndRKDToken.wsdl

20.3 Get Categories (GetCategories_1)

The GetCategories_1 method returns a list of categories a document could be filed under. These categories are used in the SearchSubmissions_1 request.

There are no input parameters required for GetCategories_1 request.

Example:

XML Sample Request - Get Categories

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/FilingsSearch/FilingsSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2012/05/07/webservices/rkd/FilingsSearch_1/GetCategories_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetCategories_Request_1 xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xmlns="http://www.reuters.com/ns/2012/05/07/webservices/rkd/FilingsSearch_1"/>
  </Body>
</Envelope>
```

The following information is returned:

XML Sample Response - Get Categories

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2012/05/07/webservices/rkd/FilingsSearch_1/GetCategories_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <GetCategories_Response_1 xmlns="http://www.reuters.com/ns/2012/05/07/webservices/rkd/FilingsSearch_1">
      <categoryInfo categoryID="1" categoryName="Annual"></categoryInfo>
      <categoryInfo categoryID="2" categoryName="Press"></categoryInfo>
      <categoryInfo categoryID="10" categoryName="Trust Indenture Act"></categoryInfo>
      <categoryInfo categoryID="11" categoryName="Public Utility Holding Company Act"></categoryInfo>
      <categoryInfo categoryID="12" categoryName="Interim"></categoryInfo>
      <categoryInfo categoryID="13" categoryName="Miscellaneous - General"></categoryInfo>
      <categoryInfo categoryID="14" categoryName="Other - General"></categoryInfo>
      <categoryInfo categoryID="15" categoryName="Other - Equity and M&A"></categoryInfo>
      <categoryInfo categoryID="16" categoryName="Ownership - General"></categoryInfo>
      <categoryInfo categoryID="17" categoryName="Ownership - Equity and M&A"></categoryInfo>
      <categoryInfo categoryID="18" categoryName="Prospectus - Debt"></categoryInfo>
      <categoryInfo categoryID="19" categoryName="Prospectus - General"></categoryInfo>
      <categoryInfo categoryID="20" categoryName="Prospectus - Equity and M&A"></categoryInfo>
      <categoryInfo categoryID="21" categoryName="Proxy & Information - General"></categoryInfo>
      <categoryInfo categoryID="22" categoryName="Proxy & Information - Equity and M&A"></categoryInfo>
      <categoryInfo categoryID="23" categoryName="Registration, Withdrawal or Termination - Debt"></categoryInfo>
      <categoryInfo categoryID="24" categoryName="Registration, Withdrawal or Termination - General"></categoryInfo>
      <categoryInfo categoryID="25" categoryName="Registration, Withdrawal or Termination - Equity and M&A"></categoryInfo>
    </GetCategories_Response_1>
  </Body>
</Envelope>
```



Field	Description
Category ID	A universal Id for categories.
Category Name	Category type.

20.4 Get CIK By Company Name (GetCIKByCompanyName_1)

This method retrieves a list of CIKs (SEC provided company identifiers) that apply to a company name specified in the `companyName` request element. Only one company name is entered at a time.

The following example retrieves a list of CIKs for Reuters:

XML Sample Request - Get CIK By Company Name

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/FilingsSearch/FilingsSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2012/05/07/webservices/rkd/FilingsSearch_1/GetCIKByCompanyName_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetCIKByCompanyName_Request_1 xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://www.reuters.com/ns/2012/05/07/webservices/rkd/FilingsSearch_1">
      <companyName>Reuters</companyName>
    </GetCIKByCompanyName_Request_1>
  </Body>
</Envelope>
```

The response contains a list of CIK nodes that apply to the company specified in the request:

XML Sample Response - Get CIK By Company Name

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2012/05/07/webservices/rkd/FilingsSearch_1/GetCIKByCompanyName_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <GetCIKByCompanyName_Response_1 xmlns="http://www.reuters.com/ns/2012/05/07/webservices/rkd/FilingsSearch_1">
      <cik>714552</cik>
      <cik>1056084</cik>
      <cik>1108069</cik>
    </GetCIKByCompanyName_Response_1>
  </Body>
</Envelope>
```

This method applies to the EDGAR filing library only.

20.5 Get Company Info (GetCompanyInfo_1)

The `GetCompanyInfo_1` method allows searching for company information using the company name or internal companyID.

The example searches by company name specified in the `companyName` attribute. To use internal company ID, specify `companyID` attribute instead of `companyName`.

XML Sample Request - Get Company Info



```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/FilingsSearch/FilingsSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2012/05/07/webservices/rkd/FilingsSearch_1/GetCompanyInfo_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetCompanyInfo_Request_1 xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" companyName="Mothercare PLC" xmlns="http://www.reuters.com/ns/2012/05/07/webservices/rkd/FilingsSearch_1"/>
  </Body>
</Envelope>

```

You can specify the following parameters:

Parameter	Description
feedID	Optionally, you can specify one of the following feed IDs: • Edgar • Cris • Imagebase
companyID	Internal company ID.
companyName	Company name.
orgID	Organization ID.
country	Country name.
includeTestCompany	If set to true, the ID of a test company is returned.

The response returns the following information:

XML Sample Response - Get Company Info

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2012/05/07/webservices/rkd/FilingsSearch_1/GetCompanyInfo_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <GetCompanyInfo_Response_1 xmlns="http://www.reuters.com/ns/2012/05/07/webservices/rkd/FilingsSearch_1">
      <company companyID="9242" companyName="Mothercare PLC" countryCode="GB" mxID="100207700" orgID="13879"></company>
    </GetCompanyInfo_Response_1>
  </Body>
</Envelope>

```

Parameter	Description
companyID	Internal company ID.
mxID	The company id (mDNA Issuer ID) the document is filed under.
companyName	Company name.
orgID	Organization ID.
countryCode	Country code.
URL1	Company website URL.
URL2	Company website URL.
NextFilingDateDatabase	Expected next filing date for this company.



NextFilingDateSource	Source or provider of the next filing for this company.
NextFilingType	Expected next filing document type for this company.

20.6 Get Filing Index (GetFilingIndex_1)

The GetFilingIndex_1 request retrieves the list of all parts a document consists of. You need to specify the CommonID (docID) of a document. To find out docIDs, use Filings Search methods.

The following example retrieves the list of parts of the document with ID 2637295:

XML Sample Request - Get Filing Index
<pre> <Envelope xmlns="http://www.w3.org/2003/05/soap-envelope"> <Header> <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/FilingsSearch/FilingsSearch.svc</To> <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID> <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2012/05/07/webservices/rkd/FilingsSearch_1/GetFilingIndex_1</Action> <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1"> <ApplicationID>[AppID]</ApplicationID> <Token>[service token]</Token> </Authorization> </Header> <Body> <GetFilingIndex_Request_1 xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://www.reuters.com/ns/2012/05/07/webservices/rkd/FilingsSearch_1"> <document id="2637295" /> </GetFilingIndex_Request_1> </Body> </Envelope> </pre>

The response returns the following information:

XML Sample Response - Get Filing Index
<pre> <Envelope xmlns="http://www.w3.org/2003/05/soap-envelope"> <Header> <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2012/05/07/webservices/rkd/FilingsSearch_1/GetFilingIndex_1_Reply</Action> <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo> </Header> <Body> <GetFilingIndex_Response_1 xmlns="http://www.reuters.com/ns/2012/05/07/webservices/rkd/FilingsSearch_1"> <parts> <part> <sequence>1</sequence> <form>10-K</form> <description>form 10-k</description> <file>a2043532z10-k.txt.html</file> <name>a2043532z10-k.txt</name> <type>text</type> <size>256</size> <xpath>/SUBMISSION/DOCUMENT/TEXT</xpath> </part> <part> <sequence>2</sequence> <form>EX-21</form> <description>exhibit 21</description> <file>a2043532zex-21.txt.html</file> <name>a2043532zex-21.txt</name> <type>text</type> <size>1</size> <xpath>/SUBMISSION/DOCUMENT/1/TEXT</xpath> </part> <part> <sequence>3</sequence> <form>EX-23</form> </pre>



```

    <description>exhibit 23</description>
    <file>a2043532zex-23.txt.html</file>
    <name>a2043532zex-23.txt</name>
    <type>text</type>
    <size>0</size>
    <xpath>/SUBMISSION/DOCUMENT/2/TEXT</xpath>
  </part>
</parts>
</GetFilingIndex_Response_1>
</Body>
</Envelope>

```

You can determine the part number from GetFilingIndex based on the position of the part in the parts section. Parts numbering starts with 0 which, in most cases, is the base document.

20.7 Get Form Types Edgar (GetFormTypesEdgar_1)

This method returns mappings between common form name and Document Library internal code that may be used in searching the Edgar Document Library for specific forms. A request can be made for multiple forms by creating a formTypeName element for each form name.

The Get Form Types Edgar request does not require any input parameters. However, to narrow the search, you can use input parameters formTypeName and feedID.

The following example retrieves form types for formTypeName=10-12G and feedID=cris

XML Sample Request - Get Form Types Edgar

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/FilingsSearch/FilingsSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2012/05/07/webservices/rkd/FilingsSearch_1/GetFormTypesEdgar_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetFormTypesEdgar_Request_1 xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://www.reuters.com/ns/2012/05/07/webservices/rkd/FilingsSearch_1">
      <feedID>cris</feedID>
      <formTypeName>10-12G</formTypeName>
    </GetFormTypesEdgar_Request_1>
  </Body>
</Envelope>

```

Parameter	Description
formTypeName	SEC form name. Search by FormName is possible only for feedID=Edgar, otherwise the list of all forms for each feedID is returned.
feedID	Optionally, you can specify one of the following feed IDs: • Edgar • Cris • Imagebase

The response returns the following information:

XML Sample Response - Get Form Types Edgar

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2012/05/07/webservices/rkd/

```



```

FilingsSearch_1/GetFormTypesEdgar_1_Reply</Action>
<RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
</Header>
<Body>
  <GetFormTypesEdgar_Response_1 xmlns="http://www.reuters.com/ns/2012/05/07/webservices/rkd/FilingsSearch_1">
    <formTypeInfo Periodic="false" categoryID="15" categoryName="Other - Equity and M&A" feedID="cris" formTypeID="957"
    formTypeName="Acquisitions/Takeovers/Mergers"></formTypeInfo>
    <formTypeInfo Periodic="false" categoryID="13" categoryName="Miscellaneous - General" description="" feedID="cris"
    formTypeID="892" formTypeName="Addendum"></formTypeInfo>
    <formTypeInfo Periodic="false" categoryID="19" categoryName="Prospectus - General" feedID="cris" formTypeID="938"
    formTypeName="Admission"></formTypeInfo>
    <formTypeInfo Periodic="false" categoryID="19" categoryName="Prospectus - General" feedID="cris" formTypeID="939"
    formTypeName="ADRs"></formTypeInfo>
    <formTypeInfo Periodic="false" categoryID="13" categoryName="Miscellaneous - General" description="" feedID="cris"
    formTypeID="893" formTypeName="Allotments"></formTypeInfo>
    <formTypeInfo Periodic="false" categoryID="18" categoryName="Prospectus - Debt" description="Not Specified" feedID="cris"
    formTypeID="983" formTypeName="Amendment"></formTypeInfo>
    <formTypeInfo Periodic="false" categoryID="13" categoryName="Miscellaneous - General" description="" feedID="cris"
    formTypeID="894" formTypeName="Amendments"></formTypeInfo>
    ...
    <formTypeInfo Periodic="false" categoryID="13" categoryName="Miscellaneous - General" description="Image from stock exchange
    website" feedID="cris" formTypeID="885" formTypeName="Website - Stock Exchange"></formTypeInfo>
  </GetFormTypesEdgar_Response_1>
</Body>
</Envelope>

```

Parameter	Description
feedID	Source the document came from.
formTypeID	Document Library internal code.
formTypeName	SEC form name.
description	Description of the form.
categoryID	A universal Id for category the document is mapped to.
categoryName	Name of the category for each corresponding categoryID.

20.8 Search CRIS (SearchCRIS_1)

The CRIS library comprises EMEA, Asia Pacific and LATAM financial documentation.

The following example retrieves the first 100 rows of filings for McDonald's Corp:

XML Sample Request - Search CRIS

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/FilingsSearch/FilingsSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2012/05/07/webservices/rkd/FilingsSearch_1/
    GetSearchCRIS_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <SearchCRIS_Request_1 xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    companyName="McDonald's Corp" rowCount="100" xmlns="http://www.reuters.com/ns/2012/05/07/webservices/rkd/FilingsSearch_1">
      <CountryCode>US</CountryCode>
    </SearchCRIS_Request_1>
  </Body>
</Envelope>

```

The following parameters can be specified in the request:



Parameter	Description
RCAType	Root cause analysis type (if there is any delay in submission, the root cause for delay is specified).
SourceType	Source of documents.
DocumentType	Document Library internal code. This is the formTypeID parameter returned by GetFormTypesEdgar_1.
countryCode	Country code of submission.
docID	ID of the document to be retrieved.
orgID	Organization ID.
mxID	The company id (mDNA Issuer ID) the document is filed under.
companyName	Name of the company.
releaseDateFrom	Start date of the period when documents were released.
releaseDateTo	End date of the period when documents were released.
arriveDateFrom	Start date of the period when documents arrived.
arriveDateTo	End date of the period when documents arrived.
startRow	Defines the first row to be returned from the result set. Note: Currently, this is not implemented.
rowCount	Limits the amount of rows returned to a number specified here.
submissionSortOrder	Allows the results to be ordered by the following columns: • feedID • releaseDate • arriveDate • formName
sortDirection	Allows to specify Asc (Ascending) or Desc (descending) sort for a column specified in submissionSortOrder. Note that specifying only sorting attributes is not enough to make a valid request.
includeTestCompany	If set to true, the ID of a test company is returned.
FinalDocument	Specify if the document is final, or there are any other documents for the same submission.
Consolidated	Specify if multiple files are part of a single file, or they are the same submission with different file type.
sourceDescription	Description of the document source.
NextFilingDateFrom	Start date of a period to get submissions with the corresponding next filing dates.
NextFilingDateTo	End date of a period to get submissions with the corresponding next filing dates.
OriginalArrivalDateFrom	Start date of a period to get submissions with the corresponding original arrival dates.
OriginalArrivalDateTo	End date of a period to get submissions with the corresponding original arrival dates.
RCADescription	Root cause analysis description.
Notes	Notes on a submission.
Shareable	Allow to display on products based on this flag - Thomson research.
NativePDFflag	This flag indicates whether it is pdf file or not.
documentDateFrom	Start date of a period to get documents with the corresponding dates.
documentDateTo	End date of a period to get documents with the corresponding dates.
country	Country name.
maturityDateFrom	Start date of a period to get documents (mainly bonds) with the corresponding maturity dates.
maturityDateTo	End date of a period to get documents (mainly bonds) with the corresponding maturity dates.
ISIN	International Securities Identification Number.

The response returns the following information:

XML Sample Response - Search CRIS



```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2012/05/07/webservices/rkd/
      FilingsSearch_1/GetSearchCRIS_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <SearchCRIS_Response_1 totalRows="60" xmlns="http://www.reuters.com/ns/2012/05/07/webservices/rkd/FilingsSearch_1">
      <submission>
        <commonSubmission DCN="cr01774820" arriveDate="2011-11-17T15:37:17Z" category="0" commonID="28261811"
          fileName="28261811.pdf" languageCode="en" releaseDate="2011-11-17T00:00:00Z" size="1584714"></commonSubmission>
        <ifSubmission companyID="34269" documentDate="2011-11-17T00:00:00Z" documentType="981" feedID="cris"
          mxID="100085975" pageCount="120" partNumber="0" sourceDescription="Luxembourg Stock Exchange" sourceType="149"
          visibility="ALL"></ifSubmission>
        <ifCompanyInfo companyID="34269" companyName="McDonald's Corp" mxID="100085975" orgID="27356"></ifCompanyInfo>
        <additionalSearchParams AnalystName="TS\Praveen.G" NativePDFflag="true" Notes="N/A" OriginalArrivalDate="2011-11-
          17T15:37:17Z" SubmissionCountryCode="US"></additionalSearchParams>
      </submission>
      <submission>
        <commonSubmission DCN="cr01721228" arriveDate="2011-10-18T17:17:28Z" category="0" commonID="28053065"
          fileName="28053065.pdf" languageCode="en" releaseDate="2011-10-18T00:00:00Z" size="41955"></commonSubmission>
        <ifSubmission companyID="34269" documentDate="2009-06-08T00:00:00Z" documentType="986" feedID="cris"
          mxID="100085975" pageCount="10" partNumber="0" sourceDescription="Luxembourg Stock Exchange" sourceType="149"
          visibility="ALL"></ifSubmission>
        <ifCompanyInfo companyID="34269" companyName="McDonald's Corp" mxID="100085975" orgID="27356"></ifCompanyInfo>
        <additionalSearchParams AnalystName="TS\Palini.HS" NativePDFflag="true" Notes="LUX CD" OriginalArrivalDate="2011-10-
          18T17:17:28Z" SubmissionCountryCode="US"></additionalSearchParams>
      </submission>
      ...
    </SearchCRIS_Response_1>
  </Body>
</Envelope>

```

The response contains the following information on each filing:

Element	Description
commonSubmission	This element contains the following attributes: - commonID - document ID, also known as the docID, by which you can retrieve the document. - releaseDate - document release date. - arriveDate - document arrival date. - category - document category ID. - size - file size of the document. - fileName - file name. - languageCode - language the document is written in. - DCN - unique key assigned by Edgar to each submission.
ifSubmission	This element contains the following attributes: - feedID - source the document came from. - companyID - company ID. - mxID - the company id (mDNA Issuer ID) the document is filed under. - visibility - shows whether it should be displayed on all products or only Reuters Knowledge. - accountingCode - registered public accounting firm that audited the financial statements. - partNumber - section number within the document. - partDescription - section heading within the document. - documentType - Document Library internal code. - documentEtype - notes added by users. - pageCount - number of pages returned. - sourceType - type of the document source. - sourceDescription - description of the document source. - documentDate - date when the document was created (provided by company itself). - maturityDate - maturity date of a particular document (mainly bonds). - ISIN - International Securities Identification Number.
ifCompanyInfo	This element contains the following attributes: - companyID - company ID. - mxID - the company id (mDNA Issuer ID) the document is filed under. - companyName - company name. - orgID - organization ID.



	- countryCode - country code. - URL1 - company website URL. - URL2 - company website URL. - NextFilingDateDatabase - expected next filing date for this company. - NextFilingDateSource - source or provider of the next filing for this company. - NextFilingType - expected next filing document type for this company.
additionalSearchParameters	This element contains the following attributes: - FinalDocument - shows if an annual submission is final or not. If Doc type is preliminary then default is NO. - Consolidated - this field is set by user if submitted documents (more than one) are to be consolidated within one document (PDF). - NextFilingDate - expected date of the next submission by the company. - OriginalArrivalDate - date when the document entered the workflow. - NextFilingType - the filing submission doctype by company. - RCAType - root cause analysis type, shown if the user uploaded the document with delay. - RCADescription - entered by the user in case of any delay. - Notes - notes on a submission. - AnalystName - name of the analyst. - SubmissionCountryCode - country code of the submission. - Shareable - set this if this document is to be made available in XTF. - NativePDFflag - indicates whether it is a pdf file or not.
totalRows	The total number of rows returned. Note. Currently, the number shown is incorrect.

20.9 Search Edgar (SearchEdgar_1)

EDGAR is an acronym for Electronic Data Gathering, Analysis, and Retrieval system developed by the SEC that provides for the electronic transmittal of issuer filings as well as public access to such documents through the Internet. All publicly traded domestic companies use EDGAR to make the majority of their filings. Form 10-K or 10-KSB, which includes the annual report, is required to be filed on EDGAR.

EDGAR filing library contains only SEC filings. Thomson Reuters offers access to an archive of 10 years of history for all SEC filings.

The SearchEdgar_1 request retrieves submission information about documents that are submitted to the EDGAR feed. This request does not require any input parameters. However, you can use input parameters to narrow the search.

Example:

XML Sample Request - Search Edgar

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/FilingsSearch/FilingsSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2012/05/07/webservices/rkd/FilingsSearch_1/GetSearchEdgar_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <SearchEdgar_Request_1 xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      searchOption="all" xmlns="http://www.reuters.com/ns/2012/05/07/webservices/rkd/FilingsSearch_1">
      <formTypeID>113</formTypeID>
    </SearchEdgar_Request_1>
  </Body>
</Envelope>
```

You can use the following parameters:

Parameter	Description
cik	SEC Central Index Key identifier. You can specify the response to be a list of CIKs or a list of MXIDs defining



	companies you are interested in. If you don't specify CIKs (MXIDs) the search will be performed across all companies. Either CIK or MXID is allowed in the request, not both.
mxid	See above definition for CIK.
IRS Number	Number given by the USA Internal Revenue Service department, whenever a company changes its structure or name.
formTypeID	Defines the list of the SEC forms you want to filter in (like 10-Q, 10-K, etc). The mapping between SEC form name and the internal Document Library form code required for this request can be obtained by means of the GetFormTypesEdgar_1 request (see Get Form Types Edgar). The search is performed across all forms if this element is missing.
sic	Provides a list of the SEC defined industry codes you want to filter in. The search is performed across all industries if you don't specify this element.
item	Identifies one or more items declared in 8-K filings. Note that specifying this attribute alone is not enough to make a valid request.
searchOption	Should have one of the following values: • primary - means search for filings where the company is present as a primary company. • secondary - means search for filings where the company is present as a secondary (not primary) company. • all - means search for filings where the company is present in any role, either primary or secondary. • referenced - introduced to provide backward compatibility. If this option is selected, you must provide either MXID, or CIK, or IRS Number.
dateRangeOption	Should have one of the following values: • latest - means search for the latest number of filings for the specified companies. The number of returned filings is defined by the attribute "rowCount". • mostRecent - returns one most recent filing per specified company. In this case you must specify at least one CIK (or MXID, or IRS Number). • dateRange - allows to specify the date range where you want to look for filings.
dateFrom	Defines time interval if dateRangeOption attribute has value "dateRange", otherwise it is ignored. If you specify dateTo, then dateFrom is mandatory. If you provide only dateFrom, then dateTo is considered as the current date.
dateTo	Defines time interval if dateRangeOption attribute has value "dateRange", otherwise it is ignored.
dateOption	Defines what date is defined by the "dateFrom" and "dateTo" attributes. You have choice between document release date and document arrive date.
paperOption	Can have the following values: • showAll • showNotPaperOnly - value provides filtering out paper filings. • showPaperOnly - will filter in only paper filings.
ShowFDOnly	When set to true, returns only documents marked as "Full Disclosure".
ExtSubmissionInfo	If this parameter is set to true, the response will contain extra information about the submission. Note that specifying this attribute alone is not enough for a valid request.
startRow	Defines the first row to be returned from the result set.
rowCount	Defines how many rows should be returned in the result set. In all cases the row set is limited to 1000 rows.
submissionSortOrder	Defines how the result set will be sorted. It can have the following values: • releaseDate - date when document was released. • arriveDate - date when the document was inserted into Document Library. • documentDate - document period, if missing document effectiveness date, if missing release date. • formType - SEC form type. • companyName - company name.
sortDirection	Defines the result set sorting direction (ascending or descending). Note that specifying only sorting attributes is not enough to make a valid request.
FiDebtOption	Specifies if company has debt. Possible values: • Show All Fi Debt • Show No Fi Debt • Show Fi Debt
pedFrom	Set the date range for PeriodEnddate (filing date) of a submission, to get submissions for this period. If you specify pedTo, then pedFrom is mandatory. If you provide only pedFrom, then prdTo is considered as the current date.
pedTo	Set the date range for PeriodEnddate (filing date) of a submission, to get submissions for this period.



The response returns the following information:

XML Sample Response - Search Edgar

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2012/05/07/webservices/rkd/
      FilingsSearch_1/GetSearchEdgar_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <SearchEdgar_Response_1 xmlns="http://www.reuters.com/ns/2012/05/07/webservices/rkd/FilingsSearch_1">
      <submission>
        <commonSubmission arriveDate="2012-06-25T10:04:04" category="16" commonID="29647045" releaseDate="2012-06-
          25T00:00:00" size="7300"></commonSubmission>
        <edgarSubmission accessionNumber="0001062993-12-002210" formTypeID="113" formTypeName="4" lastChangeDate="2012-06-
          25T00:00:00" paperFiling="false" periodEndDate="2012-06-21T00:00:00" publicDocumentCount="1"></edgarSubmission>
        <edgarPrimaryCompanyInfo>
          <edgarShortCompanyInfo cik="1350684" companyRole="issuer" conformedName="China Information Technology, Inc."
            fiscalYearEnd="--12-31" mxid="100527846"></edgarShortCompanyInfo>
        </edgarPrimaryCompanyInfo>
        <edgarSecondaryCompanyInfo>
          <edgarShortCompanyInfo DCN="12923464" cik="1382962" companyRole="reportingOwner" conformedName="Lin Jiang
            Huai"></edgarShortCompanyInfo>
        </edgarSecondaryCompanyInfo>
      </submission>
      <submission>
        <commonSubmission arriveDate="2012-06-22T21:32:43" category="16" commonID="29644591" releaseDate="2012-06-
          22T00:00:00" size="11772"></commonSubmission>
        <edgarSubmission accessionNumber="0001140361-12-030990" formTypeID="113" formTypeName="4" lastChangeDate="2012-06-
          22T00:00:00" paperFiling="false" periodEndDate="2012-06-20T00:00:00" publicDocumentCount="1"></edgarSubmission>
        <edgarPrimaryCompanyInfo>
          <edgarShortCompanyInfo cik="1210708" companyRole="issuer" conformedName="Hudson Global, Inc." fiscalYearEnd="--12-31"
            mxid="100423855"></edgarShortCompanyInfo>
        </edgarPrimaryCompanyInfo>
        <edgarSecondaryCompanyInfo>
          <edgarShortCompanyInfo DCN="12923231" cik="1423385" companyRole="reportingOwner" conformedName="Sagard Capital
            Partners, L.P." fiscalYearEnd="--12-31"></edgarShortCompanyInfo>
        </edgarSecondaryCompanyInfo>
        <edgarSecondaryCompanyInfo>
          <edgarShortCompanyInfo DCN="12923232" cik="1423386" companyRole="reportingOwner" conformedName="Sagard Capital
            Partners Management CORP" fiscalYearEnd="--12-31"></edgarShortCompanyInfo>
        </edgarSecondaryCompanyInfo>
        <edgarSecondaryCompanyInfo>
          <edgarShortCompanyInfo DCN="12923230" cik="1423388" companyRole="reportingOwner" conformedName="Sagard Capital
            Partners GP, Inc." fiscalYearEnd="--12-31"></edgarShortCompanyInfo>
        </edgarSecondaryCompanyInfo>
      </submission>
      ...
    </submission>
  </SearchEdgar_Response_1>
</Body>
</Envelope>
```

Element	Description
commonSubmission	This element contains the following attributes: - commonID - document ID, also known as the docID, by which you can retrieve the document. - releaseDate - document release date. - arriveDate - document arrival date. - category - document category ID. - size - file size of the document. - fileName - file name. - languageCode - language the document is written in. - DCN - unique key assigned to each submission.
edgarSubmission	This element contains the following attributes: - accessionNumber - number to access the document. - paperFiling - is this submission is received from Edgar feed or scanned submission. - formTypeID - Document Library internal code.



	• formTypeName - SEC form name. • confirmingCopy - defines the submission as being a confirming copy to a paper submission. • publicDocumentCount - number of PUBLIC documents in the submission. • reference462b - refers to a prospectus relating to a registration statement updated pursuant to Rule 462B. The value represents the file number of the prior registration statement. • periodEndDate - document date. • lastChangeDate - modified date. • effectiveDate - effective date of the commencement of proposed public filings for this company. • fullDisclosure - type of the document submitted.
edgarSubmissionExt	Extra submission information (items info).
edgarShortCompanyInfo	This element contains the following attributes: • cik - SEC Central Index Key identifier. • conformedName - Filer/Registrant conformed name as it appears in the SEC's database. Required in each company data nest. • companyRole - Specifies how the company relates to submissions being searched (Filer, Serial Company, Subject Company, Reporting Owner, Issuer, Filed By, Filed For). • mxid - the company id (mDNA Issuer ID) the document is filed under. • fiscalYearEnd - the end of fiscal year. • DCN - unique key assigned to each submission.
edgarExtCompanyInfo	This element contains the following attributes: • location: • street1 • street2 • city • state • zip • phone • countryCode • sicInfo: • sic • divisionCode • majorGroupName • groupName • industryName • irsNumber - number given by the USA Internal Revenue Service. • stateOfIncorporation - state of incorporation. • fiDebt - shows company debt.

20.10 Search Edgar By Accession Number (SearchEdgarByAccessionNum_1)

This method returns information about Edgar filings specified by their accession numbers. The accession number is a required parameter.

Example:

XML Sample Request - Search Edgar By Accession Number

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/FilingsSearch/FilingsSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2012/05/07/webservices/rkd/FilingsSearch_1/GetSearchEdgarByAccessionNum_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
```



```

<SearchEdgarByAccessionNum_Request_1 xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/
XMLSchema-instance" xmlns="http://www.reuters.com/ns/2012/05/07/webservices/rkd/FilingsSearch_1">
  <accessionNumber> 0001047469-12-006650</accessionNumber>
</SearchEdgarByAccessionNum_Request_1>
</Body>
</Envelope>

```

The response returns the following information:

XML Sample Response - Search Edgar By Accession Number

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2012/05/07/webservices/rkd/
FilingsSearch_1/GetSearchEdgarByAccessionNum_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <SearchEdgarByAccessionNum_Response_1 xmlns="http://www.reuters.com/ns/2012/05/07/webservices/rkd/FilingsSearch_1">
      <submission>
        <commonSubmission DCN="12908643" arriveDate="2012-06-15T10:06:33" category="1" commonID="29595062"
releaseDate="2012-06-15T00:00:00" size="37543259"></commonSubmission>
        <edgarSubmission accessionNumber="0001047469-12-006650" formTypeID="13" formTypeName="10-K" lastChangeDate="2012-
06-14T00:00:00" paperFiling="false" periodEndDate="2011-12-31T00:00:00" publicDocumentCount="380"></edgarSubmission>
        <edgarPrimaryCompanyInfo>
          <edgarShortCompanyInfo DCN="12908643" cik="1528393" companyRole="filer" conformedName="ZaZa Energy Corp"
fiscalYearEnd="--12-31" mxid="111860549"></edgarShortCompanyInfo>
          <edgarExtCompanyInfo irsNumber="452986089" stateOfIncorporation="DE">
            <location city="HOUSTON" countryCode="US" phone="713-595-1900" state="TX" street1="1301 MCKINNEY STREET"
street2="SUITE 2850" zip="77010" "></location>
            <sicInfo divisionCode="B" groupName="Crude petroleum and natural gas" industryName="Crude petroleum and natural gas"
majorGroupName="Oil And Gas Extraction" sic="1311"></sicInfo>
          </edgarExtCompanyInfo>
          </edgarPrimaryCompanyInfo>
        </submission>
      </SearchEdgarByAccessionNum_Response_1>
    </Body>
  </Envelope>

```

Element	Description
commonSubmission	This element contains the following attributes: - commonID - document ID, also known as the docID, by which you can retrieve the document. - releaseDate - document release date. - arriveDate - document arrival date. - category - document category ID. - size - file size of the document. - fileName - file name. - languageCode - language the document is written in. - DCN - unique key assigned by Edgar to each submission.
edgarSubmission	This element contains the following attributes: - accessionNumber - number to access the document. - paperFiling - is this submission is received from Edgar feed or scanned submission. - formTypeID - Document Library internal code. - formTypeName - SEC form name. - confirmingCopy - defines the submission as being a confirming copy to a paper submission. - publicDocumentCount - number of PUBLIC documents in the submission. - reference462b - refers to a prospectus relating to a registration statement updated pursuant to Rule 462B. The value represents the file number of the prior registration statement. - periodEndDate - document date. - lastChangeDate - modified date. - effectiveDate - effective date of the commencement of proposed public filings for this company. - fullDisclosure - type of the document submitted.
edgarSubmissionExt	Extra submission information (items info).



edgarShortCompanyInfo	This element contains the following attributes: - cik - SEC Central Index Key identifier. - conformedName - Filer/Registrant conformed name as it appears in the SEC's database. Required in each company data nest. - mxid - the company id (mDNA Issuer ID) the document is filed under. - fiscalYearEnd - the end of fiscal year. - DCN - unique key assigned to each submission.
edgarExtCompanyInfo	This element contains the following attributes: - location: - street1 - street2 - city - state - zip - phone - countryCode - sicInfo: - sic - divisionCode - majorGroupName - groupName - industryName - irsNumber - number given by the USA Internal Revenue Service. - stateOfIncorporation - state of incorporation. - fiDebt - shows company debt.

20.11 Search Edgar Unique Company Info (SearchEdgarUniqueCompanyInfo_1)

Each Edgar filing contains profiles of one or more companies related to this filing. In many cases profiles for the same company in the different filings contain the same information. In other cases there are differences (e.g. address or phone number changed). Document Library collects company profiles. Each unique company profile is attached to the filing it was submitted with.

The SearchEdgarUniqueCompanyInfo_1 method returns all filings that contain unique company profiles.

This example retrieves filings for cik 714552:

XML Sample Request - Search Edgar Unique Company Info

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/FilingsSearch/FilingsSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2012/05/07/webservices/rkd/FilingsSearch_1/GetSearchEdgarUniqueCompanyInfo_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <SearchEdgarUniqueCompanyInfo_Request_1 xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://www.reuters.com/ns/2012/05/07/webservices/rkd/FilingsSearch_1">
      <cik>714552</cik>
    </SearchEdgarUniqueCompanyInfo_Request_1>
  </Body>
</Envelope>
```

Parameter	Description



cik	SEC Central Index Key identifier. Mandatory parameter. To find out a cik of a company by its name, use GetCIKByCompanyName_1 operation.
submissionSortOrder	Defines how the result set will be sorted. It can have the following values: • releaseDate - date when document was released. • arriveDate - date when the document was inserted into Document Library. • documentDate - document period, if missing document effectiveness date, if missing release date. • formType - SEC form type. • companyName - company name.
sortDirection	Defines the result set sorting direction (ascending or descending).

The response returns the following information:

XML Sample Response - Search Edgar Unique Company Info

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2012/05/07/webservices/rkd/
FilingsSearch_1/GetSearchEdgarUniqueCompanyInfo_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <SearchEdgarUniqueCompanyInfo_Response_1 xmlns="http://www.reuters.com/ns/2012/05/07/webservices/rkd/FilingsSearch_1">
      <submission>
        <commonSubmission DCN="09040658" arriveDate="2009-05-27T12:06:06" category="1" commonID="11927109"
releaseDate="2009-04-02T00:00:00" size="1668"></commonSubmission>
        <edgarSubmission accessionNumber="999999997-09-019794" effectiveDate="2009-04-02T00:00:00" formTypeID="558"
formTypeName="X-17A-5" lastChangeDate="2009-05-27T00:00:00" paperFiling="true" periodEndDate="2008-12-31T00:00:00"
publicDocumentCount="1"></edgarSubmission>
        <edgarPrimaryCompanyInfo>
          <edgarShortCompanyInfo DCN="09040658" cik="714552" companyRole="filer" conformedName="REUTERS TRANSACTION
SERVICES LLC" fiscalYearEnd="--12-31"></edgarShortCompanyInfo>
          <edgarExtCompanyInfo irsNumber="260137609" stateOfIncorporation="NY">
            <location city="NEW YORK" phone="646-223-7742" state="NY" street1="3 TIMES SQUARE" zip="10036" "></location>
            <sicInfo divisionCode="" groupName="" industryName="" majorGroupName="" sic="0"></sicInfo>
          </edgarExtCompanyInfo>
        </edgarPrimaryCompanyInfo>
      </submission>
      <submission>
        <commonSubmission arriveDate="2008-05-15T17:44:02" category="13" commonID="10249661" releaseDate="2008-03-
31T00:00:00" size="1665"></commonSubmission>
        <edgarSubmission accessionNumber="999999997-08-024014" effectiveDate="2008-03-31T00:00:00" formTypeID="307"
formTypeName="FOCUSN" lastChangeDate="2008-05-15T00:00:00" paperFiling="true" periodEndDate="2007-12-31T00:00:00"
publicDocumentCount="1"></edgarSubmission>
        <edgarPrimaryCompanyInfo>
          <edgarShortCompanyInfo cik="714552" companyRole="filer" conformedName="REUTERS TRANSACTION SERVICES LLC"
fiscalYearEnd="--12-31"></edgarShortCompanyInfo>
          <edgarExtCompanyInfo irsNumber="260137609" stateOfIncorporation="NY">
            <location city="NEW YORK" phone="646-223-7784" state="NY" street1="3 TIMES SQUARE" zip="10036" "></location>
            <sicInfo divisionCode="" groupName="" industryName="" majorGroupName="" sic="0"></sicInfo>
          </edgarExtCompanyInfo>
        </edgarPrimaryCompanyInfo>
      </submission>
      ...
    </SearchEdgarUniqueCompanyInfo_Response_1>
  </Body>
</Envelope>
```

Element	Description
commonSubmission	This element contains the following attributes: • commonID - document ID, also known as the docID, by which you can retrieve the document. • releaseDate - document release date. • arriveDate - document arrival date. • category - document category ID. • size - file size of the document. • fileName - file name.



	- languageCode - language the document is written in. - DCN - unique key assigned by Edgar to each submission.
edgarSubmission	This element contains the following attributes: - accessionNumber - number to access the document. - paperFiling - is this submission is received from Edgar feed or scanned submission. - formTypeID - Document Library internal code. - formTypeName - SEC form name. - confirmingCopy - defines the submission as being a confirming copy to a paper submission. - publicDocumentCount - number of PUBLIC documents in the submission. - reference462b - refers to a prospectus relating to a registration statement updated pursuant to Rule 462B. The value represents the file number of the prior registration statement. - periodEndDate - document date. - lastChangeDate - modified date. - effectiveDate - effective date of the commencement of proposed public filings for this company. - fullDisclosure - type of the document submitted.
edgarSubmissionExt	Extra submission information (items info).
edgarShortCompanyInfo	This element contains the following attributes: - cik - SEC Central Index Key identifier. - conformedName - Filer/Registrant conformed name as it appears in the SEC's database. Required in each company data nest. - mxid - the company id (mDNA Issuer ID) the document is filed under. - fiscalYearEnd - the end of fiscal year. - DCN - unique key assigned to each submission.
edgarExtCompanyInfo	This element contains the following attributes: - location: - street1 - street2 - city - state - zip - phone - countryCode - sicInfo: - sic - divisionCode - majorGroupName - groupName - industryName - irsNumber - number given by the USA Internal Revenue Service. - stateOfIncorporation - state of incorporation. - fiDebt - shows company debt.

20.12 Search ImageBase (SearchImageBase_1)

The ImageBase library comprises fixed income prospectuses, paper filings and forms 144A in the US.

Please note that the ImageBase library is obsolete - it contains only submissions for 2011 and earlier.

The following example retrieves the first 100 rows of filings for McDonald's Corp:

XML Sample Request - Search ImageBase

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/FilingsSearch/FilingsSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2012/05/07/webservices/rkd/FilingsSearch_1/GetSearchImageBase_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <SearchImageBase_1>
      <Request>
        <FirstIndex>0</FirstIndex>
        <LastIndex>100</LastIndex>
      </Request>
    </SearchImageBase_1>
  </Body>
</Envelope>
```




```

    </Authorization>
  </Header>
  <Body>
    <SearchImageBase_Request_1 xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    companyName="McDonald's Corp" rowCount="100" xmlns="http://www.reuters.com/ns/2012/05/07/webservices/rkd/FilingsSearch_1">
      <CountryCode>US</CountryCode>
    </SearchImageBase_Request_1>
  </Body>
</Envelope>

```

The following parameters can be specified in the request:

Parameter	Description
RCAType	Root cause analysis type (if there is any delay in submission, the root cause for delay is specified).
SourceType	Source of documents.
DocumentType	Document Library internal code. This is the formTypeID parameter returned by GetFormTypesEdgar_1.
countryCode	Country code of submission.
docID	ID of the document to be retrieved.
orgID	Organization ID.
mxID	The company id (mDNA Issuer ID) the document is filed under.
companyName	Name of the company.
releaseDateFrom	Start date of the period when documents were released.
releaseDateTo	End date of the period when documents were released.
arriveDateFrom	Start date of the period when documents arrived.
arriveDateTo	End date of the period when documents arrived.
startRow	Defines the first row to be returned from the result set. Note: Currently, this is not implemented.
rowCount	Limits the amount of rows returned to a number specified here.
submissionSortOrder	Allows the results to be ordered by the following columns: • feedID • releaseDate • arriveDate • formName
sortDirection	Allows to specify Asc (Ascending) or Desc (descending) sort for a column specified in submissionSortOrder. Note that specifying only sorting attributes is not enough to make a valid request.
includeTestCompany	If set to true, the ID of a test company is returned.
FinalDocument	Specify if the document is final, or there are any other documents for the same submission.
Consolidated	Specify if multiple files are part of a single file, or they are the same submission with different file type.
sourceDescription	Description of the document source.
NextFilingDateFrom	Start date of a period to get submissions with the corresponding next filing dates.
NextFilingDateTo	End date of a period to get submissions with the corresponding next filing dates.
OriginalArrivalDateFrom	Start date of a period to get submissions with the corresponding original arrival dates.
OriginalArrivalDateTo	End date of a period to get submissions with the corresponding original arrival dates.
RCADescription	Root cause analysis description.
Notes	Notes on a submission.
Shareable	Allow to display on products based on this flag - Thomson research.
NativePDFflag	This flag indicates whether it is PDF file or not.

XML Sample Response - Search ImageBase



```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2012/05/07/webservices/rkd/
    FilingsSearch_1/GetSearchImageBase_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <SearchImageBase_Response_1 totalRows="98" xmlns="http://www.reuters.com/ns/2012/05/07/webservices/rkd/FilingsSearch_1">
      <submission>
        <commonSubmission arriveDate="2011-03-08T10:38:43Z" category="0" commonID="26578508" fileName="26578508.pdf"
        languageCode="en" releaseDate="2011-02-17T00:00:00Z" size="271271"></commonSubmission>
        <ifSubmission ISIN="XS0592505316" companyID="34269" documentDate="2011-02-02T00:00:00Z" documentEType="LUX SE"
        documentType="672" feedID="imagebase" maturityDate="2021-02-17T00:00:00Z" mxID="100085975" pageCount="10"
        visibility="ALL"></ifSubmission>
        <ifCompanyInfo companyID="34269" companyName="McDonald's Corp" mxID="100085975" orgID="27356"></ifCompanyInfo>
        <additionalSearchParams AnalystName="ts\jackie.frost" Consolidated="false" FinalDocument="true" NativePDFflag="false"
        OriginalArrivalDate="2011-03-08T10:38:43Z" Shareable="false" SubmissionCountryCode="US"></additionalSearchParams>
      </submission>
      <submission>
        <commonSubmission DCN="ib00393312" arriveDate="2010-09-16T04:12:37Z" category="0" commonID="14574790"
        fileName="14574790.tif" languageCode="en" releaseDate="2010-09-16T00:00:00Z" size="253064"></commonSubmission>
        <ifSubmission companyID="34269" documentDate="2010-09-16T00:00:00Z" documentEType="Source-CMU;CMU Code-
        CBHKFN10001" documentType="674" feedID="imagebase" maturityDate="2013-09-16T00:00:00Z" mxID="100085975" pageCount="18"
        visibility="INT"></ifSubmission>
        <ifCompanyInfo companyID="34269" companyName="McDonald's Corp" mxID="100085975" orgID="27356"></ifCompanyInfo>
        <additionalSearchParams AnalystName="TS\MieMie.Tzeto" Consolidated="false" FinalDocument="true" NativePDFflag="false"
        OriginalArrivalDate="2010-09-16T04:12:37Z" Shareable="false" SubmissionCountryCode="US"></additionalSearchParams>
      </submission>
      ...
    </SearchImageBase_Response_1>
  </Body>
</Envelope>

```

The response contains the following information on each filing:

Element	Description
commonSubmission	This element contains the following attributes: - commonID - document ID, also known as the docID, by which you can retrieve the document. - releaseDate - document release date. - arriveDate - document arrival date. - category - document category ID. - size - file size of the document. - fileName - file name. - languageCode - language the document is written in. - DCN - unique key assigned by Edgar to each submission.
ifSubmission	This element contains the following attributes: - feedID - source the document came from. - companyID - company ID. - mxID - the company id (mDNA Issuer ID) the document is filed under. - visibility - shows whether it should be displayed on all products or only Reuters Knowledge. - accountingCode - registered public accounting firm that audited the financial statements. - partNumber - section number within the document. - partDescription - section heading within the document. - documentType - Document Library internal code. - documentEType - notes added by users. - pageCount - number of pages returned. - sourceType - type of the document source. - sourceDescription - description of the document source. - documentDate - date when the document was created (provided by company itself). - maturityDate - maturity date of a particular document (mainly bonds). - ISIN - International Securities Identification Number.
ifCompanyInfo	This element contains the following attributes: - companyID - company ID. - mxID - the company id (mDNA Issuer ID) the document is filed under. - companyName - company name.



	• orgID - organization ID. • countryCode - country code. • URL1 - company website URL. • URL2 - company website URL. • NextFilingDateDatabase - expected next filing date for this company. • NextFilingDateSource - source or provider of the next filing for this company. • NextFilingType - expected next filing document type for this company.
additionalSearchParameters	This element contains the following attributes: • FinalDocument - shows if an annual submission is final or not. If Doc type is preliminary then default is NO. • Consolidated - set by user if submitted documents (more than one) are to be consolidated within one document (PDF). • NextFilingDate - expected date of the next submission by the company. • OriginalArrivalDate - date when the document entered the workflow. • NextFilingType - the filing submission doctype by company. • RCAType - root cause analysis type, shown if the user uploaded the document with delay. • RCADescription - entered by the user in case of any delay. • Notes - notes on a submission. • AnalystName - name of the analyst. • SubmissionCountryCode - country code of the submission. • Shareable - set this if this document is to be made available in XTF. • NativePDFflag - indicates whether it is a PDF file or not.
totalRows	The total number of rows returned. Note. Currently, the number shown is incorrect.

20.13 Search Submissions (SearchSubmissions_1)

The SearchSubmissions_1 method performs the search on all Filing Libraries and returns information on available documents. This method retrieves records only for companies that were assigned an MXID. If a search is for a company where MXID was not assigned, use library specific search methods.

The SearchSubmissions_1 request does not require any input parameters. If no parameters are provided, 100 submissions (rows) are displayed.

However, input parameters can be used to pinpoint specific submissions. For instance, providing the input parameter values 'startRow' as 150 and 'rowCount' as 10 will display the rows from 150 to 159.

Example:

XML Sample Request - Search Submissions

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/FilingsSearch/FilingsSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2012/05/07/webservices/rkd/FilingsSearch_1/GetSearchSubmissions_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <SearchSubmissions_Request_1 xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" sortDirection="Desc" submissionSortOrder="releaseDate" showRestricted="true" returnAutomationInfo="true" returnRowCountOnly="false" rowCount="10" dateRangeOption="latest" startRow="150" dateOption="useReleaseDate" xmlns="http://www.reuters.com/ns/2012/05/07/webservices/rkd/FilingsSearch_1">
      <mxid>100088827</mxid>
      <categoryID>16</categoryID>
      <countryCode>US</countryCode>
      <rbssCode>52</rbssCode>
      <languageCode>en</languageCode>
    </SearchSubmissions_Request_1>
  </Body>
</Envelope>
```



The following parameters can be specified in the request:

Parameter	Description
dateRangeOption	Accepts either: - latest - returns 100 latest filings. Note: If you use "latest" for dateRangeOption you will not be able to use startRow attribute to specify first row to be returned from the data set. - dateRange - lets you specify a date range in attributes "dateFrom" and "dateTo". Note: If you intend to search using date range by entering values into "dateFrom" and "dateTo" then the "dateRangeOption" attribute should be set to dateRange.
dateOption	Sorts the records by Release date or Arrive Date. The following are the values to be used: - useReleaseDate - retrieves the records sorted by Release Date in the order specified during the request in submissionSortOrder parameter. - useArriveDate - retrieves the records sorted by Arrive Date in the order specified during the request in submissionSortOrder parameter.
startRow	Defines the first row to be returned from the result set. Note: Currently, this is not implemented.
rowCount	Limits the amount of rows returned to a number specified here.
submissionSortOrder	Allows the results to be ordered by the following columns: - feedID - releaseDate - arriveDate - formName
sortDirection	Allows to specify Asc (Ascending) or Desc (descending) sort for column specified in submissionSortOrder.
rbssCode	Reuters Business Sector Schema is an industry classification code.
mxid	mxid of a specific company.
categoryID	Category the filing belongs to. To get a list of categories and corresponding IDs, use the GetCategories_1 method.
countryCode	Country code of the company the filing belongs to.
languageCode	Identifies the language of the submission.
showRestricted	Set this parameter to true, if you want to display information about restricted documents (marked as internal).
returnRowCountOnly	If you set this parameter to true, only the quantity of rows is returned.
returnAutomatedInfo	If this parameter is set to true, then for some markets (Japan, Korea, China, etc.), xbrl file details are returned, if any xbrl file is available.

The response returns the following information:

XML Sample Response - Search Submissions

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2012/05/07/webservices/rkd/FilingsSearch_1/GetSearchSubmissions_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <SearchSubmissions_Response_1 xmlns="http://www.reuters.com/ns/2012/05/07/webservices/rkd/FilingsSearch_1">
      <resultSize>10</resultSize>
      <submissionInfo arriveDate="2012-05-22T14:58:10" categoryID="16" commonID="29439659" countryCode="US" feedID="Edgar"
        fileType="edgar" formName="4" formType="113" isRestricted="false" languageCode="en" originalFileName="0001209191-12-029667.
        dissem" periodEndDate="2012-05-18T00:00:00" releaseDate="2012-05-22T00:00:00" size="7006">
        <companyInfo mxid="100088827"></companyInfo>
      </submissionInfo>
      <submissionInfo arriveDate="2012-04-26T19:44:14" categoryID="16" commonID="29218366" countryCode="US" feedID="Edgar"
        fileType="edgar" formName="4" formType="113" isRestricted="false" languageCode="en" originalFileName="0001209191-12-024328.
        dissem" periodEndDate="2012-04-25T00:00:00" releaseDate="2012-04-26T00:00:00" size="5386">
        <companyInfo mxid="100088827"></companyInfo>
      </submissionInfo>
      <submissionInfo arriveDate="2012-04-26T19:43:23" categoryID="16" commonID="29218362" countryCode="US" feedID="Edgar"
        fileType="edgar" formName="4" formType="113" isRestricted="false" languageCode="en" originalFileName="0001209191-12-024327.
        dissem" periodEndDate="2012-04-25T00:00:00" releaseDate="2012-04-26T00:00:00" size="5386">
        <companyInfo mxid="100088827"></companyInfo>
      </submissionInfo>
    </SearchSubmissions_Response_1>
  </Body>
</Envelope>
```



```

dissem" periodEndDate="2012-04-25T00:00:00" releaseDate="2012-04-26T00:00:00" size="5383">
  <companyInfo mxid="100088827"></companyInfo>
  </submissionInfo>
  <submissionInfo arriveDate="2012-04-26T19:43:01" categoryID="16" commonID="29218355" countryCode="US " feedID="Edgar"
fileType="edgar" formName="4" formType="113" isRestricted="false" languageCode="en" originalFileName="0001209191-12-024326.
dissem" periodEndDate="2012-04-25T00:00:00" releaseDate="2012-04-26T00:00:00" size="5365">
  <companyInfo mxid="100088827"></companyInfo>
  </submissionInfo>
  ...
</SearchSubmissions_Response_1>

</Body>
</Envelope>

```

The response contains the following information on each filing, regardless of the Library it comes from:

Field	Description
resultSize	The number of results.
automationInfo	Contains the following xbrl file details: • fileName • extension • type • primary
DCN	Unique key assigned to each submission.
nativePdfFlag	Indicates whether it is a pdf file or not.
arriveDate	Arrive date of the document.
categoryID	Category the document belongs to.
commonID	Document ID, also known as the docID, gives you the id by which you can retrieve the document.
countryCode	Country of the company the filing belongs to.
feedID	Source the document came from.
fileType	Format of the file. Note: For all Edgar filings the value for this attribute will be "edgar". Edgar document has complex SGML format and cannot be displayed without special parsing/processing.
formName	Original document form name.
formType	SEC form type.
isRestricted	Boolean value denoting restriction status.
LanguageCode	Language the document is written in. This attribute is not present if the language could not be identified.
originalFileName	Original name of the file.
periodEndDate	Document date.
releaseDate	Release date of the document.
size	File size of the document.
mxid	The company id (mDNA Issuer ID) the document is filed under.

The response of the search contains document information universal to all Libraries. If further, Edgar Library specific, information is required, a library specific search can be conducted using EDGAR Filings methods.



chapter 21 Fund Screener

The Fund Screener provides easy access to funds from Lipper's extensive database of collective investments, allowing clients to quickly find funds based on hundreds of criteria items and to compare those funds across a wide range of timely characteristics.

Thomson Reuters Fund Screener provides users with highly selective fund-related information based on their specific requirements. These requirements form the selection criteria, stated in terms of expressions and variables. The high level of flexibility possible in the specification of the selection criteria guarantees the desired granularity in the information made available by Fund Screener.

The source data used by Fund Screener comes from the Lipper database. DataSets are generated from the database and provide up-to-date information on more than 400,000 funds, from all over the world. This information includes fundamental, financial, analytical, statistical, and research data. The ability to select from such high quality, up-to-date and varied data provides the users the best tools to assist them in the decision making process.

You can use the following operations in order to retrieve Fund Screener data:

- **Get Screening Meta Data (GetScreeningMetaData_1)** - retrieves meta data for screening expressions.
- **Get Screening Counts (GetScreeningCounts_1)** - use this method to start a new screening operation or alter an existing screening operation.
- **Get Screening Results Synch (GetScreeningResultsSynch_1)** - gets the screening results.

21.1 Authentication/Authorization, Service Endpoint, and Required Headers

Authorization

All requests to Fund Screener service require an authorization token. For details, see section Understanding Authentication Tokens.

Authentication

Fund Screener uses Reuters impersonation tokens for each effective user. In this case, Thomson Reuters must create each user before your application authenticates them. Unmanaged effective users are not supported in Fund Screener.

For additional information on creating a Service Token, see section Creating a Token.

Service Endpoint

Fund Screener Endpoint

`http://api.rkd.reuters.com/api/LipperScreening/LipperScreening.svc`

Required Header

Required HTTP Headers

POST /api/LipperScreening/LipperScreening.svc HTTP/1.1
Content-Type: application/soap+xml
Host: api.rkd.reuters.com
Content-Length: [length]

21.2 WSDL

WSDL:

http://api.rkd.reuters.com/schemas/LipperScreening/wsd/LipperScreening_1_HttpAndRKDToken.wsdl

21.3 How to Get Screen Results?

In order to get screen results you need to do the following:

1. Use GetScreeningCounts_1 method to start a new screening operation. Pass 'null' for 'operationId' and specify a set of criteria. See section Get Screening Counts (GetScreeningCounts_1) for more details.
2. Use the GetScreeningResultsSynch_1 method to retrieve the data.

21.4 Get Screening Meta Data (GetScreeningMetaData_1)

Use the GetScreeningMetaData_1 method to retrieve the metadata for screening expressions.

Metadata for each language is different and currently Fund Screener supports the following languages:

- Chinese Simplified
- Chinese Taiwan
- Dutch
- English
- French
- German
- Italian
- Japanese
- Korean
- Language Neutral (default)
- Spanish
- Thai
- Traditional Chinese

XML Sample Request - Getting Screening Meta Data

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperScreening/LipperScreening.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperScreening_1/GetScreeningMetaData_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetScreeningMetaData_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperScreening_1">
      <language>ChineseSimplified</language>
    </GetScreeningMetaData_Request_1>
  </Body>
</Envelope>
```

The response returns a DataSet that is organized by rows into a parent/child structure. The rows in the DataSet can represent a criteria category, such as "Attributes"; a criteria field, such as "Domiciles"; or a value for a criteria field, such as "Japan" for Domicile.

XML Sample Response - Getting Screening Meta Data

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
```



```

<s:Header>
  <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperScreening_1/
  GetScreeningMetaData_1_Reply</a:Action>
  <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
  xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
    <Date>2009-04-17T10:41:48.639875Z</Date>
    <DoNotStore />
  </CacheResponse>
  <a:RelatesTo>[MessageID]</a:RelatesTo>
</s:Header>
<s:Body>
  <GetScreeningMetaData_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperScreening_1">
    <ScreeningMetaDataResult>
      <xs:schema id="NewDataSet" xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns="" xmlns:msdata="urn:schemas-
      microsoft-com:xml-msdata" xmlns:msprop="urn:schemas-microsoft-com:xml-msprop">
        <xs:element name="NewDataSet" msdata:IsDataSet="true" msdata:UseCurrentLocale="true">
          <xs:complexType>
            <xs:choice minOccurs="0" maxOccurs="unbounded">
              <xs:element name="Table">
                <xs:complexType>
                  <xs:sequence>
                    <xs:element name="CAPTION_ID" msprop:OrDbType="112" type="xs:int" minOccurs="0"/>
                    <xs:element name="PARENT_CAPTION_ID" msprop:OrDbType="112" type="xs:int" minOccurs="0"/>
                    <xs:element name="LANGUAGE_ID" msprop:OrDbType="107" type="xs:decimal" minOccurs="0"/>
                    <xs:element name="NAME" msprop:OrDbType="119" type="xs:string" minOccurs="0"/>
                    <xs:element name="VARIABLE_TYPE_ID" msprop:OrDbType="112" type="xs:int" minOccurs="0"/>
                    <xs:element name="DEFAULT_LOGICAL_OPERATOR_ID" msprop:OrDbType="112" type="xs:int"
                    minOccurs="0"/>
                    <xs:element name="EDITOR_ID" msprop:OrDbType="107" type="xs:decimal" minOccurs="0"/>
                    <xs:element name="IN_RESULTS" msprop:OrDbType="107" type="xs:decimal" minOccurs="0"/>
                  </xs:sequence>
                </xs:complexType>
              </xs:element>
            </xs:choice>
          </xs:complexType>
        </xs:element>
      </xs:schema>
      <diffgr:diffgram xmlns:diffgr="urn:schemas-microsoft-com:xml-diffgram-v1" xmlns:msdata="urn:schemas-microsoft-com:xml-
      msdata">
        <NewDataSet xmlns="">
          <Table diffgr:id="Table1" msdata:rowOrder="0">
            <CAPTION_ID>12232</CAPTION_ID>
            <PARENT_CAPTION_ID>10619</PARENT_CAPTION_ID>
            <LANGUAGE_ID>2</LANGUAGE_ID>
            <NAME>BVI Eq Sect Raw Mat/Energy</NAME>
            <VARIABLE_TYPE_ID>2</VARIABLE_TYPE_ID>
            <DEFAULT_LOGICAL_OPERATOR_ID>0</DEFAULT_LOGICAL_OPERATOR_ID>
            <EDITOR_ID>0</EDITOR_ID>
            <IN_RESULTS>0</IN_RESULTS>
          </Table>
          <Table diffgr:id="Table2" msdata:rowOrder="1">
            <CAPTION_ID>32241</CAPTION_ID>
            <PARENT_CAPTION_ID>32307</PARENT_CAPTION_ID>
            <LANGUAGE_ID>2</LANGUAGE_ID>
            <NAME>Percentage Growth - 3 Month Rank</NAME>
            <VARIABLE_TYPE_ID>4</VARIABLE_TYPE_ID>
            <DEFAULT_LOGICAL_OPERATOR_ID>1</DEFAULT_LOGICAL_OPERATOR_ID>
            <EDITOR_ID>5</EDITOR_ID>
            <IN_RESULTS>1</IN_RESULTS>
          </Table>
          <Table diffgr:id="Table3" msdata:rowOrder="2">
            <CAPTION_ID>10981</CAPTION_ID>
            <PARENT_CAPTION_ID>10953</PARENT_CAPTION_ID>
            <LANGUAGE_ID>2</LANGUAGE_ID>
            <NAME>Cambial Outros sem alavancagem</NAME>
            <VARIABLE_TYPE_ID>2</VARIABLE_TYPE_ID>
            <DEFAULT_LOGICAL_OPERATOR_ID>0</DEFAULT_LOGICAL_OPERATOR_ID>
            <EDITOR_ID>0</EDITOR_ID>
            <IN_RESULTS>0</IN_RESULTS>
          </Table>
          ....
          <Table diffgr:id="Table3611" msdata:rowOrder="3610">
            <CAPTION_ID>845</CAPTION_ID>
            <PARENT_CAPTION_ID>27820</PARENT_CAPTION_ID>
            <LANGUAGE_ID>4842</LANGUAGE_ID>
          </Table>
        </NewDataSet>
      </diffgram>
    </ScreeningMetaDataResult>
  </GetScreeningMetaData_Response_1>
</s:Body>

```




```

        <NAME>åŸfåš</NAME>
        <VARIABLE_TYPE_ID>2</VARIABLE_TYPE_ID>
        <DEFAULT_LOGICAL_OPERATOR_ID>1</DEFAULT_LOGICAL_OPERATOR_ID>
        <EDITOR_ID>1</EDITOR_ID>
        <IN_RESULTS>1</IN_RESULTS>
      </Table>
    </NewDataSet>
  </diffgr:diffgram>
</ScreeningMetaDataResult>
</GetScreeningMetaData_Response_1>
</Body>
</Envelope>

```

The DataSet includes the following items for each row:

Attribute	Description
CAPTION_ID	All rows in the DataSet contain a numerical CaptionID that represents the row value. It is used in GetScreeningCounts_1 and GetScreeningResultsSynch_1 operations.
PARENT_CAPTION_ID	The Caption ID number of the row's parent row.
LANGUAGE_ID	The language of the data in the row. You set this in the language parameter when invoking GetScreeningMetaData_1 method.
NAME	The name of the criteria group, criteria field, or value.
VARIABLE_TYPE_ID	For internal Lipper use only.
DEFAULT_LOGICAL_OPERATOR	The logical operator (AND or OR) to be used when joining multiple instances of the same criteria field in a screening operation. For example, OR is the default logical operator for Caption ID "299" (Domicile) because an asset can only have one domicile country in the Lipper database.
EDITOR_ID	For internal Lipper use only.
IN_RESULTS	Defines whether this variable will be included only in the criteria or in results as well.

21.5 Get Screening Counts (GetScreeningCounts_1)

Use the GetScreeningCounts_1 method to start a new screening operation or alter an existing screening operation. The method takes the <screeningOperationId> parameter (pass null to start a new screening operation) and a set of criteria.

Fund Screener remembers the specified set of criteria as 'operationId'. Later, when you need to retrieve the data itself, you can just pass 'operationId' without the list of criteria.

XML Sample Request - Getting Screening Counts

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperScreening/LipperScreening.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperScreening_1/GetScreeningcounts_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetScreeningCounts_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperScreening_1">
      <screeningOperationId/>
      <screeningCriteria>
        <ScreeningStepCriteria>
          <Criteria>
            <CriteriaItem>
              <OpenParenCount>0</OpenParenCount>
              <CompareValue>100</CompareValue>
              <CompareValueDataType>Number</CompareValueDataType>
              <Currency>USD</Currency>
              <Universe>USA</Universe>
            </CriteriaItem>
          </Criteria>
        </ScreeningStepCriteria>
      </screeningCriteria>
    </GetScreeningCounts_Request_1>
  </Body>
</Envelope>

```



```

        <Operation>GreaterThanOrEqual</Operation>
        <SelectedItem>32271</SelectedItem>
        <CloseParenCount>0</CloseParenCount>
        <LogicalOperator xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
      </CriteriaItem>
    </Criteria>
  </ScreeningStepCriteria>
</screeningCriteria>
<language>English</language>
</GetScreeningCounts_Request_1>

</Body>
</Envelope>

```

Parameter	Description
OpenParenCount	Specifies the number of open parentheses for this criteria item. Parentheses are used to group criteria items together so that the criteria group executes as one criteria item.
CompareValue	Specifies the compare value or criteria value that will be compared or evaluated in the screening operation. The criteria value will be a Caption ID from the screening metadata only for those criteria where the value was selected from a list - for example: country, currency, etc. For example, if <SelectedItem> is set to "1034" for Asset Type, <CompareValue> might be "1035" for Money Market. For criteria where values are entered manually - for example, date, number, etc - then the entered value is specified in <CompareValue> and <CompareValueDataType> specifies data type for <CompareValue>.
CompareValueDataType	Defines the data type of the <CompareValue>. Allowed values for <CompareValueDataType>: • MetaData • Date • Number • String • Currency • Symbol
Currency	Sets the currency (three-digit currency code) used in this criteria item.
Universe	The alphabetic universe code (f.e. 'USA', 'ITA', etc). There are 30 universes in the Lipper database, and assets belong to one or more universes.
Operation	Specifies the comparison operator used in this criteria item. Can have the following values: • None • GreaterThan • GreaterThanOrEqual • LessThan • LessThanOrEqual • Equal • NotEqual • Contains • StartsWith • NotContains • NotStartsWith
SelectedItem	Defines the selected item or criteria field. The criteria field value will be a Caption ID from the screening metadata. For example, "1034" for the Asset Type criteria field.
CloseParenCount	Specifies the number of closed parentheses for this criteria item. Parentheses are used to group criteria items together so that the criteria group executes as one criteria item.
LogicalOperator	Defines the logical operator, which joins this criterion to the next criteria. Possible values are: • And • Or

The response returns operationId and number of funds that meet the specified criteria.

XML Sample Response - Getting Screening Counts

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperScreening_1/
      GetScreeningCounts_1_Reply</a:Action>

```



```

<CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <Date>2009-04-17T10:41:48.639875Z</Date>
  <DoNotStore />
</CacheResponse>
<a:RelatesTo>[MessageID]</a:RelatesTo>
</s:Header>
<s:Body>
  <GetScreeningCounts_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperScreening_1">
    <GetScreeningCountsResult>
      <ScreeningOperationId>CD8758E8968B41D98EC7158E4E263255</ScreeningOperationId>
      <Steps>
        <StepCount>
          <Count>28</Count>
        </StepCount>
      </Steps>
    </GetScreeningCountsResult>
  </GetScreeningCounts_Response_1>
</Body>
</Envelope>

```

Attribute	Description
ScreeningOperationId	The screening operation ID.
StepCount	The screening step counts.

21.6 Get Screening Results Synch (GetScreeningResultsSynch_1)

GetScreeningResultsSynch_1 method gets the screening results synch.

XML Sample Request - Getting Screening Results Synch

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperScreening/LipperScreening.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperScreening_1/
    GetScreeningResultsSynch_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetScreeningResultsSynch_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperScreening_1">
      <screeningOperationId>CD8758E8968B41D98EC7158E4E263255</screeningOperationId>
      <columnsFilter>
        <int>28029</int>
        <int>32271</int>
      </columnsFilter>
      <generateResultset>true</generateResultset>
    </GetScreeningResultsSynch_Request_1>
  </Body>
</Envelope>

```

Parameter	Description
screeningOperationId	The screening operation id.
pagingSortingFilter	The paging sorting filter. Can have the following attributes: - PageNumber - sets the page number. - RowsPerPage - sets the rows per page. - SortColumn - sets sort column. - SortDirection - sets sort direction.
screeningGridFilter	The screening grid filter. Can have the following attributes:



	• ClassificationScheme - sets the classification scheme. • Currency - sets the currency. • Language - sets the language. • Universe - sets the universe.
columnsFilter	The columns filter. Contain a list of Column IDs to be retrieved by the request.
generateResultset	If set to true generates resultset. Note: You should set <generateResultset> to 'true' only when making the request for the first time. All consecutive times, you should set <GenerateResultset> to 'false' unless you change the screening criteria used to generate the counts.

The response returns funds and their data according to the specified criteria:

XML Sample Response - Getting Screening Results Synch

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperScreening_1/
    GetScreeningResultsSynch_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetScreeningResultsSynch_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperScreening_1">
      <GetScreeningResultsSynchResult>
        <Results>
          <ScreeningGridRow>
            <LipperId>65060311</LipperId>
            <Values>
              <GridValue>
                <Column>28029</Column>
                <Value xsi:type="p8:string" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:p8="http://www.w3.
                org/2001/XMLSchema">Brazilian Real</Value>
              </GridValue>
              <GridValue>
                <Column>32271</Column>
                <Value xsi:type="p8:decimal" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:p8="http://www.w3.
                org/2001/XMLSchema">120.3040</Value>
              </GridValue>
            </Values>
          </ScreeningGridRow>
          <ScreeningGridRow>
            <LipperId>65060312</LipperId>
            <Values>
              <GridValue>
                <Column>28029</Column>
                <Value xsi:type="p8:string" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:p8="http://www.w3.
                org/2001/XMLSchema">Brazilian Real</Value>
              </GridValue>
              <GridValue>
                <Column>32271</Column>
                <Value xsi:type="p8:decimal" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:p8="http://www.w3.
                org/2001/XMLSchema">121.9315</Value>
              </GridValue>
            </Values>
          </ScreeningGridRow>
          ...
          <ScreeningGridRow>
            <LipperId>65065859</LipperId>
            <Values>
              <GridValue>
                <Column>28029</Column>
                <Value xsi:type="p8:string" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:p8="http://www.w3.
                org/2001/XMLSchema">Brazilian Real</Value>
              </GridValue>
              <GridValue>
                <Column>32271</Column>
                <Value xsi:type="p8:decimal" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:p8="http://www.w3.
```



```
    org/2001/XMLSchema">136.7597</Value>
  </GridValue>
</Values>
</ScreeningGridRow>
</Results>
</GetScreeningResultsSynchResult>
</GetScreeningResultsSynch_Response_1>

</Body>
</Envelope>
```

Attribute	Description
LipperId	A unique eight- or nine-digit number that identifies an asset.
Values	The list of <GridValue> elements. A GridValue represents one cell in the grid. Contains the following sub-elements: • Column - the column's ID. • Value - the column's value.



chapter 22 Fundamentals

You can access Thomson Reuters Fundamentals through the Thomson Reuters Knowledge API for timely, accurate, and comprehensive financial information. The information is collected in an "as reported" and "company specific" manner. The "as reported" aspect indicates that financial values are not adjusted or changed. The "company specific" aspect indicates that Thomson Reuters is able to collect and display financial statement information while retaining each company's line item descriptions, currencies, periods etc.

Thomson Reuters Fundamentals includes:

- industry aggregates
- fundamental reference data
- ratios and statistics
- company-specific and standardized financials
- originally reported and restated information
- business and geographic segments
- business descriptions and web-links
- officers and directors
- company's competitors and customers
- consistency with other Thomson Reuters Company Databases, such as Thomson Reuters Estimates and Business Intelligence databases

22.1 Authentication/Authorization, Service Endpoint, and Required Headers

Authorization

All requests to the Fundamentals service require an authorization token. For details, see section Understanding Authentication Tokens.

Authentication

Fundamentals use Reuters impersonation tokens for each effective user. In this case, Thomson Reuters must create each user before your application authenticates them. Unmanaged effective users are not supported in Fundamentals.

For additional information on creating a Service Token, see section Creating a Token.

Service Endpoint

Fundamentals Endpoint

`http://api.rkd.reuters.com/api/Fundamentals/Fundamentals.svc`

Required Header

Required HTTP Headers

`POST /api/Fundamentals/Fundamentals.svc HTTP/1.1`
`Content-Type: application/soap+xml`
`Host: api.rkd.reuters.com`
`Content-Length: [length]`

22.2 WSDL

WSDL:

`http://api.rkd.reuters.com/schemas/Fundamentals/wsdll/Fundamentals_1_HttpAndRKDToken.wsdl`



22.3 Interpreting Common Fundamental Elements

Many of the Thomson Reuters Knowledge Direct API fundamentals methods use common request and response elements for company identifiers, issues, and general company information.

The following requests all use 'companyId' and 'companyIdType' attributes and return 'CoIDs', 'Issues', and 'CoGeneralInfo' elements:

- GetLongCompanyDescription_1
- GetMajorCustomers_1
- GetCompetitors_1
- GetRatiosStatistics_1
- GetFinancialStatementsReports_1
- GetRatiosReports_1
- GetSnapshotReports_1

22.3.1 companyIdType and companyId - Request Attributes

The companyId attribute is used across all Fundamentals requests to identify a particular company for which to obtain information. The value of this attribute is dependent upon the company being queried and the value of the companyIdType attribute. The companyIdType attribute specifies what type of company identifier is being used in companyId. "repono" provides the greatest probability of targeting the desired company because a repono is a unique, un-ambiguous identifier for fundamentals information and does not require symbology resolution. This value is case-insensitive.

Value	Description	Example
TICKER	Exchange ticker symbol	TRIN
RIC	Reuters Instrument Code	TRIN.O
REPO	Unique ID for companies in the Fundamentals API	B0867

22.3.2 CoIDs - Response Element

The CoIDs element provides detail on company level identifiers and is similar to the CompanyXRef information found in financials responses. These identifiers are issued at a company level - therefore there is only one of each for every company. Please note that the required attribute 'RepNo' is the permanent identifier for a company in the Thomson Reuters database.

XML Sample - CoIDs Response Element

```
<CoIDs xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/CompanyContentCommon_1">
  <CoID Type="RepNo">B0867</CoID>
  <CoID Type="CompanyName">Thomson Reuters PLC (ADR)</CoID>
  <CoID Type="CIKNo">0001056084</CoID>
</CoIDs>
```

Value	Description
RepNo	Thomson Reuters internal company identifier for fundamentals.
Company name	Descriptive company name.
MXID	Reuters internal company identifier.
CIKNo	SEC Central Index Key identifier.
IRSNo	IRS Employer identification Number.

22.3.3 Issues, Issue, and IssueID - Response Elements

The Issues section provides information on issue-specific identifiers.



XML Sample - Issues Element

```

<Issues xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/CompanyContentCommon_1">
  <Issue ID="1" Type="C" Desc="Common Stock" Order="1">
    <IssueID Type="Name">Ordinary Shares</IssueID>
    <IssueID Type="Ticker">TRIN</IssueID>
    <IssueID Type="RIC">TRIN.O</IssueID>
    <IssueID Type="DisplayRIC">TRIN.OQ</IssueID>
    <Exchange Code="NASDAQ" Country="USA">NASDAQ</Exchange>
    <GlobalListingType SharesPerListing="6.0">ADR</GlobalListingType>
  </Issue>
  <Issue ID="2" Type="C" Desc="Common Stock" Order="2">
    <IssueID Type="Name">Common Stock</IssueID>
    <Exchange Code="NYSE" Country="USA">New York Stock Exchange</Exchange>
  </Issue>
</Issues>

```

22.3.3.1 Issue Type and Order - Response Elements

Thomson Reuters tracks information on both common and preferred equity types, as well as on multiple classes of each. When a company has both common and preferred equity stock trading, Thomson Reuters Knowledge Direct API designates the common stock as the primary stock. The primary stock has an order of 1. If a company has more than one class of common, then the class of common stock with the higher trading volume or the larger float is designated as the primary class. Please note that the financial statement information is not issue specific, but is published at the company level.

22.3.3.2 Global Listings

Some company issues often trade on multiple exchanges throughout the world. These cross exchange listings generally represent the same issue of stock, and therefore the same fundamental information. Reuters only tracks the listing on the primary exchange in these cases.

However, certain cross border listings such as American Depositary Receipt's (ADR's) and Global Shares are stored as separate 'issuers' in the Thomson Reuters Knowledge fundamental database because regulatory bodies of certain markets require the disclosure of financial statements per local accounting. Each of these 'companies' have their own set of financial statements.

Specifically, to meet the listing requirements in the US, companies have to file US GAAP financial statements in addition to the local accounting system or the International Accounting System (IAS) that they may be reporting for their local markets. For these companies, the US GAAP financial statements are available from the North American region or Global subscription.

Global Listing Type	Description
ADR	American Depositary Receipt
LDR	Level I ADR
ROF	Rule 144 shares
EDR	European Depositary Receipt
CCR	Canadian Cross Listing
GSR	Global Share

22.3.3.3 Stock Splits

If there has been a stock split since the company was first added to the Thomson Reuters database the most recent split date and split factor will be provided in the XML data. For example, a split factor of 2 indicates that a 2-for-1 stock split has occurred. When the stock split becomes effective, Thomson Reuters Knowledge Direct API uses the split factor to adjust all per share and shares outstanding fields in the fundamental database. As such all data is adjusted to reflect the current share capital structure. If there have been no stock splits since the company was added to the database, the element will not be published.



22.3.4 CoGeneralInfo Element

The CoGeneralInfo element provides company-specific information about primary issues, latest statement filing dates, and the status of the company in the Fundamentals database.

XML Sample - CoGeneralInfo Element

```
<CoGeneralInfo xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/CompanyContentCommon_1">
  <CoStatus Code="1">Active</CoStatus>
  <CoType Code="EQU">Equity Issue</CoType>
  <LastModified>2008-11-14</LastModified>
  <LatestAvailableAnnual>2007-12-31</LatestAvailableAnnual>
  <Employees LastUpdated="2008-04-17">50000</Employees>
  <SharesOut Date="2008-11-11" TotalFloat="816100000.0">824277974.0</SharesOut>
  <ReportingCurrency Code="USD">U.S. Dollars</ReportingCurrency>
  <MostRecentExchange Date="2008-11-21">1.0</MostRecentExchange>
</CoGeneralInfo>
```

22.3.4.1 CoStatus Element

The company status level indicates whether a company is still active in the Thomson Reuters fundamental database. Thomson Reuters changes the status to inactive when the company stops trading as the result of certain business events. These events include acquisitions, mergers, bankruptcy or taken private.

Code	Description	Note
0	Inactive	Company is inactive in the Reuters fundamental database.
1	Active	Company is currently active in the Reuters fundamental database.

22.3.4.2 CoType Element

This indicates the type of capital structure a company has or the type of issues the company primarily trades. Please note that the Thomson Reuters fundamental database primarily covers financial statement information for publicly traded equities.

The majority of companies trade Equity and a minority trade Debt Issues only, with the other types appearing infrequently. If a company trades more than one type of the stock, only the primary stock will be used to describe the company type.

Code	Description	Note
EQU	Equity	Company trades common shares. Additionally, the company may have other types of securities such as debt and preferred stock issued.
DBT	Debt Issue	Company has publicly traded debt but no common or preferred stock trading.
PRE	Preferred Issue	Company had preferred stock but no common stock trading.
LPS	Limited Partnership	A partnership with two kinds of partners: limited partners, who provide financial backing and have little role in management and no personal liability, and general partners, who are responsible for managing the entity and have unlimited personal liability for its debts.
IPO	Pre-IPO	Company has filed an IPO registration statement, but shares are not trading in the market.
PVT	Private	Company is private.
SPL	Special	Special Companies.

22.3.4.3 Fiscal Period Information

This level of the files provides the date the financial report was last modified, the current fiscal period, the most current quarter and the year-end month. The number of employees and the date this figure was last updated is also provided.



22.3.4.4 Share Information

The number of shares outstanding as well as the total float is also provided at this level. The shares outstanding are the most recently reported total number of shares as reported by the company. The total float is the most recently reported total number of shares outstanding which are not owned by insiders or the majority shareholders. The update date can differ from the most recent reported results of the company. This section also describes the currency each issuer used in its most recent financial statement, and the current exchange rate to the US Dollar.

22.4 Get Business And Geographic Segments (GetBusinessAndGeographicSegments_1)

Companies reporting segment information usually report Business Segments, Geographic Segments or both. For companies that report Business Segment and Geographic Segment information, Thomson Reuters captures financial information for each segment on both an annual and interim basis.

Both Geographical and Business Segments use the GetBusinessAndGeographicSegments_1 request to retrieve the information. The required segmentType element in the method is used to indicate which segment to retrieve by having a value of either "BS" for Business Segment or "GS" for Geographic Segment. The following table shows all the attributes the method offers that can be used to narrow down a search:

Name	Enumeration	Default	Required
CompanyID			x
CompanyIdType			x
countryCode			
segmentType	BS, GS		x
numPeriods		5	
startDate			
endDate			
startFY			
endFY			
fpNumber		0	
coaCodes		All	
displayTypes		All	
showCompanyInfo		0	
showStatementInfo		0	
showIssues		0	
showAvailability		0	
PeriodType	A, I	A	
updateType	Originally Reported , MostRecent, AllTypes	MostRecent	
completeStatement	Partial, Complete , AllStatements	AllStatements	
finalFiling	Final, Preliminary, AllFilings	AllFilings	

numPeriods - To retrieve the most recent periods the value for numPeriods has to be positive. By default, the value 5 is



retrieving five most recent periods. To retrieve the earliest periods the value has to be negative. For example entering - 3 will retrieve the earliest periods available on that company.

coaCodes - By default, the value of coaCodes are 'ALL' , which returns all coa codes for the company. To get only a small set of specific COA codes, specify the individual COA codes in a comma separated list (e.g. "AITL,LLTD,QEDG").

countryCode - countryCode only applies if a TICKER was chosen for companyIDtype and the TICKER entered does not specify the location of the company.

Note: Thomson Reuters recommends using REPONO for CompanyID Type.

22.4.1 Making a Geographic Segment Request

Shows financial information for that company broken up into the following geographic regions:

- Americas
- Europe/Middle East/Africa
- Asia/Pacific
- Global

The following example makes a request for Geographic Segment that will retrieve financial information for only one period, in this case it will be for the previous year since periodType is by default set to annual.

XML Sample Request - Making a Geographic Segment Request

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Fundamentals/Fundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1/GetBusinessAndGeographicSegments_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetBusinessAndGeographicSegments_Request_1 xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1"
      segmentType="GS" companyId="ticker" companyId="TRIN" numPeriods="1" countryCode="" startFY="0" endFY="0"
      fpNumber="0" periodType="A" coaCodes="All" showCompanyInfo="false" showIssues="false" showStatementInfo="false"
      showAvailability="false" />
  </Body>
</Envelope>
```

XML Sample Response - Making a Geographic Segment Request

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1/GetBusinessAndGeographicSegments_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-14T12:56:25.3036846Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetBusinessAndGeographicSegments_Response_1 xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1">
      <BGSInformation Major="2" Minor="0" Revision="1" xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/BusinessAndGeographicSegments_1">
        <RepNo>B0867</RepNo>
        <ReferenceInformation xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/CommonContent_1"></ReferenceInformation>
        <FinancialInformation>
```



```

<FinancialsLayout>
...
<MapItem LineID="8" COA="RTLRL">Total Revenue</MapItem>
<MapItem LineID="9" COA="ECOR">Cost of Revenue</MapItem>
<MapItem LineID="10" COA="GRP">Gross Profit</MapItem>
<MapItem LineID="11" COA="GROSM">Gross Margin (%)</MapItem>
...
</FinancialsLayout>
<FinancialStatements>
<Period PeriodEndDate="2007-12-31" PeriodType="Annual">
  <PeriodHeader>
    <FiscalPeriod Year="2007" FiscalMonth="12"></FiscalPeriod>
  </PeriodHeader>
  <Statements>
    <Statement PeriodEndDate="2007-12-31" PeriodType="Annual" StatementDate="2007-12-31" Type="BUS">
      <StatementHeader>
        <FinalFiling>1</FinalFiling>
        <OriginalAnnouncement>2008-04-17T21:27:00</OriginalAnnouncement>
        <Currencies ConvertedTo="USD" Reported="USD" RepToConvExRate="1.000000"></Currencies>
        <Units ConvertedTo="M" Reported="M"></Units>
        <Consolidated>1</Consolidated>
        <PeriodLength Type="Months" Code="M">12</PeriodLength>
        <UpdatedType Code="UPD">Updated Normal</UpdatedType>
        <Source Date="2008-04-17">20-F</Source>
        <Document ID="10085415" IsInternal="0"></Document>
        <SystemDate>2008-04-18</SystemDate>
      </StatementHeader>
      <FinancialValues>
        <SegmentDetails Order="1">
          <SegmentCode1>514191</SegmentCode1>
          <SegmentCode2>523999</SegmentCode2>
          <SegmentName>Markets Division</SegmentName>
          <SegmentValues>
            <SV COA="REXR">7332.000000</SV>
            <SV COA="RTLRL">7332.000000</SV>
          </SegmentValues>
        </SegmentDetails>
        ...
        <SegmentDetails Order="5">
          <SegmentCode1>CONSTL</SegmentCode1>
          <SegmentName>Consolidated Total</SegmentName>
          <SegmentValues>
            ...
          </SegmentValues>
        </SegmentDetails>
      </FinancialValues>
    </Statement>
  </Statements>
</Period>
</FinancialStatements>
</FinancialInformation>
</BGSInformation>
</GetBusinessAndGeographicSegments_Response_1>
</Body>
</Envelope>

```

FinancialLayout - this section appears once per file. Its purpose is to lay out the order in which financial values will appear for each period and each Business or Geographic Segment. This map gives the line item COA code, description and LineID.

See Chart of Account (COA) Codes for more information.

Period - a Period element has two main sub-elements - PeriodHeader and Statements.

- **PeriodHeader** contains additional information about the period, including the Fiscal Year of the period, the interim type and interim number, and the 'true' fiscal month of the period. Interim type and number are only applicable to interim statements.
- **Statement** contains one financial statement per period and all of its associated financial values (BusinessAndGeographicSegments is a restated product; therefore each statement indicates most recent "restated" statements only).

In this example numPeriods attribute was set to 1 so there is only information for one period. If the element was left blank



financial information for five periods would have been retrieved.

For more information on Periods see section Periods and Filings.

SegmentDetails has the bulk of the information. It contains Segment Code elements that list the regions covered in each SegmentName. Segment Codes are assigned by Thomson Reuters based on the segment description as provided by the company. Each segment can be assigned up to four codes. Its sub-element SegmentValue shows financial information for that period. The SegmentDetail is displayed in a predefined order stated in the Order attribute.

SegmentValues section indicates the financial values and ratios for each segments as reported by the company. Each to financial value and/or ratio is assigned to a COA code.

22.4.2 Making a Business Segment Request

The Business Segment divides the information into business segments defined by the SegmentCode that contains the 1997 NAICS code(s) that describe each segment.

This example retrieves Business Segment for one period as well as the company info.

XML Sample Request - Making a Business Segment Request

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Fundamentals/Fundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1/GetBusinessAndGeogrpahicSegments_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetBusinessAndGeographicSegments_Request_1 xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1"
      segmentType="BS" companyIdType="ticker" companyId="TRIN" numPeriods="1" countryCode="" startFY="0" endFY="0"
      fpNumber="0" periodType="A" coaCodes="All" showCompanyInfo="true" showIssues="false" showStatementInfo="false"
      showAvailability="false" />
  </Body>
</Envelope>
```

XML Sample Response - Making a Business Segment Request

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1/GetBusinessAndGeographicSegments_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-14T12:56:25.3036846Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetBusinessAndGeographicSegments_Response_1 xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1">
      <BGSIInformation Major="2" Minor="0" Revision="1" xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/BusinessAndGeographicSegments_1">
        <RepNo>B0867</RepNo>
        <ReferenceInformation xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/CommonContent_1"></ReferenceInformation>
        <FinancialInformation>
          <FinancialsLayout>
            ...
            <MapItem LineID="8" COA="RTLRT">Total Revenue</MapItem>
            <MapItem LineID="9" COA="ECOR">Cost of Revenue</MapItem>
            <MapItem LineID="10" COA="GRP">Gross Profit</MapItem>
          </FinancialsLayout>
        </FinancialInformation>
      </BGSIInformation>
    </GetBusinessAndGeographicSegments_Response_1>
  </s:Body>
</s:Envelope>
```



```

    <MapItem LineID="11" COA="GROSM">Gross Margin (%)</MapItem>
    ...
  </FinancialsLayout>
  <FinancialStatements>
    <Period PeriodEndDate="2007-12-31" PeriodType="Annual">
      <PeriodHeader>
        <FiscalPeriod Year="2007" FiscalMonth="12"></FiscalPeriod>
      </PeriodHeader>
      <Statements>
        <Statement PeriodEndDate="2007-12-31" PeriodType="Annual" StatementDate="2007-12-31" Type="BUS">
          <StatementHeader>
            <FinalFiling>1</FinalFiling>
            <OriginalAnnouncement>2008-04-17T21:27:00</OriginalAnnouncement>
            <Currencies ConvertedTo="USD" Reported="USD" RepToConvExRate="1.000000"></Currencies>
            <Units ConvertedTo="M" Reported="M"></Units>
            <Consolidated>1</Consolidated>
            <PeriodLength Type="Months" Code="M">12</PeriodLength>
            <UpdatedType Code="UPD">Updated Normal</UpdatedType>
            <Source Date="2008-04-17">20-F</Source>
            <Document ID="10085415" IsInternal="0"></Document>
            <SystemDate>2008-04-18</SystemDate>
          </StatementHeader>
          <FinancialValues>
            <SegmentDetails Order="1">
              <SegmentCode1>514191</SegmentCode1>
              <SegmentCode2>523999</SegmentCode2>
              <SegmentName>Markets Division</SegmentName>
              <SegmentValues>
                <SV COA="REXR">7332.000000</SV>
                <SV COA="RTLRL">7332.000000</SV>
              </SegmentValues>
            </SegmentDetails>
            ...
            <SegmentDetails Order="5">
              <SegmentCode1>CONSTL</SegmentCode1>
              <SegmentName>Consolidated Total</SegmentName>
              <SegmentValues>
                ...
              </SegmentValues>
            </SegmentDetails>
          </FinancialValues>
        </Statement>
      </Statements>
    </Period>
  </FinancialStatements>
</FinancialInformation>
</BGSInformation>
</GetBusinessAndGeographicSegments_Response_1>
</Body>
</Envelope>

```

The breakdown is similar to Geographic Segment except rather than presenting the information broken up by regions it is presented by financial categories specified in segmentName. The sub-element Segment code indicates 1997 NAICS codes as values which describe each segment rather than the country or region code.

22.5 Get Business Summary (GetBusinessSummary_1)

The GetBusinessSummary_1 request allows the user to retrieve a business description for a company in a localized language. Currently Japanese, Chinese and English are supported.

The following example retrieves business summary for IBM in English language:

XML Sample Request - Getting Business Summary

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Fundamentals/Fundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1/

```



```

    GetBusinessSummary_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetBusinessSummary_Request_1 companyId="IBM" companyIdType="ticker" countryCode="USA" lang="en-US" xmlns:
      xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns="http://www.reuters.com/
      ns/2009/01/26/webservices/rkd/Fundamentals_1"/>
  </Body>
</Envelope>

```

The table below lists all parameters that can be specified in a request:

Attribute	Description
companyId	The companyId attribute is used across all Fundamentals requests to identify a particular company for which to obtain information. The value of this attribute depends on the company being queried and the value of the companyIdType attribute.
companyIdType	The companyIdType attribute specifies what type of company identifier is being used in companyId. The possible values are: • ticker - exchange ticker symbol. • ric - Reuters Instrument Code. • repono - Unique ID for companies in the Fundamentals API.
countryCode	countryCode only applies if a TICKER was chosen for companyIdType and the TICKER entered does not specify the location of the company.
lang	Defines the language, in which the company's business description should be returned. Currently Japanese (ja-JP), Chinese (zh-CHS) and English (en-US) are supported. Note: Not all companies have the corresponding data in Japanese/Chinese. If the corresponding language file is missing, the response will return data in English as default.

The response returns the following data:

XML Sample Response - Getting Business Summary	
<pre> <s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing"> <s:Header> <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1/ GetBusinessAndGeographicSegments_1_Reply</a:Action> <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns: xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema"> <Date>2009-04-14T12:56:25.3036846Z</Date> <DoNotStore /> </CacheResponse> <a:RelatesTo>[MessageID]</a:RelatesTo> </s:Header> <s:Body> <GetBusinessSummary_Response_1 LastUpdated="2011-05-11T14:52:57" lang="en-US" SourceFilingDate="2010-03-02T00:00:00" SourceFilingType="PRS; PRS; PRS" xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1"> International Business Machines Corporation (IBM) is an information technology (IT) company. It operates under five segments: Global Technology Services (GTS), Global Business Services (GBS), Software, Systems and Technology, and Global Financing. GTS primarily provides IT infrastructure services and business process services. GBS primarily provides professional services and application management services. IBM's Software segment consists primarily of middleware and operating systems software. IBM provides clients with business solutions requiring advanced computing power and storage capabilities. Global Financing invests in financing assets and leverages with debt. During the year ended December 31, 2010, IBM acquired Intelliden Inc., National Interest Security Company, LLC, Cast Iron Systems, BigFix, Inc., Datacap Inc., Clarity Systems, BLADE Network Technologies, Netezza Corporation, Lombardi and Unica Corporation. In April 2011, it acquired TRIRIGA, Inc. </GetBusinessSummary_Response_1> </Body> </Envelope> </pre>	

Element	Description
LastUpdated	Last update date and time for the textual data.
lang	Language in which text is presented. Currently English, Japanese and Chinese are supported.



SourceFilingDate	Filing date of source document.
SourceFilingType	Type of source document, such as 10-K.

22.6 Get Company Specific Financials (GetCompanySpecificFinancials_1)

The following is an example on how to get company specific financials.

XML Sample Request - Getting Company Specific Financials

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/2009/01/26/Fundamentals_1.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1/GetCompanySpecificFinancials_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetCompanySpecificFinancials_Request_1 xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1"
      finStatement="AIS" companyIdType="ticker" companyId="TRIN" countryCode="" startFY="0" endFY="0" fpNumber="0"
      updateType="MostRecent" completeStatement="AllStatements" finalFiling="AllFilings" showCompanyInfo="false" showIssues="false"
      showStatementInfo="false" showAvailability="false" />
  </Body>
</Envelope>
```

The following table shows all the attributes the method offers that can be used to narrow down a search:

Name	Enumeration	Default	Required
companyId			x
companyIdType			x
countryCode			
segmentType	BS, GS		x
numPeriods		5	
startDate			
endDate			
startFY			
endFY			
fpNumber		0	
coaCodes		All	
displayTypes		All	
showCompanyInfo		0	
showStatementInfo		0	
showIssues		0	
showAvailability		0	
PeriodType	A, I	A	
updateType	Originally Reported, MostRecent, AllTypes	MostRecent	



completeStatement	Partial, Complete, AllStatements	AllStatements	
finalFiling	Final, Preliminary, AllFilings	AllFilings	

numPeriods - To retrieve the most recent periods the value for numPeriods has to be positive. By default, the value 5 is retrieving five most recent periods. To retrieve the earliest periods the value has to be negative. For example entering - 3 will retrieve the earliest periods available on that company.

coaCodes - By default, the value of coaCodes are 'ALL' , which returns all coa codes for the company. To get only a small set of specific COA codes, specify the individual COA codes in a comma separated list (e.g. "AITL,LLTD,QEDG").

countryCode - countryCode only applies if a TICKER was chosen for companyIDtype and the TICKER entered does not specify the location of the company.

Note: Thomson Reuters recommends using REPONO for CompanyID Type.

The response returns the following data:

XML Sample Response - Getting Company Specific Financials

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1/
    GetCompanySpecificFinancials_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-14T12:56:25.3036846Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>7bd7f532f7a04a29bb12e732f0f3050d</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetCompanySpecificFinancials_Response_1 xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1">
      <CompanySpecificFinancials Major="2" Minor="0" Revision="1" xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/
      SpecificFinancials_1">
        <RepNo>B0867</RepNo>
        <ReferenceInformation xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/CommonContent_1"></
        ReferenceInformation>
        <FinancialInformation>
          <FinancialsLayout>
            <Layout Type="INC">
              <MapItem Display="Regular" LineID="1" COA="RNTS" STDLineID="SREV">Revenues</MapItem>
              <MapItem Display="Regular" LineID="2" COA="RTLRL" STDLineID="RTLRL">Total Revenue</MapItem>
              ...
              <MapItem Display="Footnote - Pnsn" LineID="58" COA="VTPE" STDLineID="VTPE">Total Pension Expense</MapItem>
              <MapItem Display="Footnote - Pnsn" LineID="59" COA="VISA" STDLineID="VISA">Assumptions</MapItem>
            </Layout>
          </FinancialsLayout>
          <FinancialStatements>
            <Period PeriodEndDate="2007-12-31" PeriodType="Annual">
              <PeriodHeader>
                <FiscalPeriod Year="2007" FiscalMonth="12"></FiscalPeriod>
              </PeriodHeader>
              <PeriodFilings>
                <PeriodFiling PeriodEndDate="2007-12-31" PeriodType="Annual" StatementDate="2007-12-31">
                  <PeriodFilingHeader>
                    <FinalFiling>1</FinalFiling>
                    <OriginalAnnouncement>2008-04-17T21:27:00</OriginalAnnouncement>
                    <Currencies ConvertedTo="USD" Reported="USD" RepToConvExRate="1.0"></Currencies>
                    <Units ConvertedTo="M" Reported="M"></Units>
                  </PeriodFilingHeader>
                  <Statements>
                    <Statement PeriodEndDate="2007-12-31" PeriodType="Annual" StatementDate="2007-12-31" Type="INC">
```



```

<StatementHeader>
  <CompleteStatement>1</CompleteStatement>
  <Flash>0</Flash>
  <PeriodLength Type="Months" Code="M">12</PeriodLength>
  <UpdateType Code="UPD">Updated Normal</UpdateType>
  <Source Date="2008-04-17">20-F</Source>
  <Document ID="10085415" IsInternal="0"></Document>
  <SystemDate>2008-04-18</SystemDate>
  <StatementLastUpdated>2008-04-18T15:01:20</StatementLastUpdated>
  <ReportedAccountingStandard Code="USG">U.S. GAAP</ReportedAccountingStandard>
  <Consolidated>1</Consolidated>
</StatementHeader>
<FinancialValues>
  <FV LineID="1">12442</FV>
  <FV LineID="2">12442</FV>
  ...
  <FV LineID="45">805</FV>
  <FV LineID="46">641</FV>
</FinancialValues>
</Statement>
</Statements>
</PeriodFiling>
</PeriodFilings>
</Period>
</FinancialStatements>
</FinancialInformation>
</CompanySpecificFinancials>
</GetCompanySpecificFinancials_Response_1>
</Body>
</Envelope>

```

For more information on data contained in the Get Company Specific Financials response see the Company Specific Financials Responses section.

22.7 Financial Statements Concepts

The Thomson Reuters Knowledge Direct API provides access to all financial line items reported by companies on the annual and interim financial statements.

This information is available in one of two views:

- The Company Specific view displays all items collected from the income statement, balance sheet and cash flow with line descriptions and values as reported by companies. This facilitates complete reconciliation to source documents.
- The Standardized view aggregates relevant line items to provide a more standard view of company financials. This makes ratio calculations and comparison across companies easier.

API requests and responses for company-specific and standardized financials are very similar, with most differences occurring in the line-item element detail. Section Getting Financial Statements will cover the concepts and data points common to both APIs. For an explanation of making specific requests and responses and details specific to each API, see section Interpreting Financials Responses.

22.7.1 Types of Statements

For both company-specific and standardized financials, the Thomson Reuters Knowledge Direct API offers access to annual and interim data for balance sheets, income statements, and statements of cash flow.

- **Balance Sheet** - A balance sheet is the financial statement of a business that lists the assets, debts, and owners' investment as of a specific date. You can use the Thomson Reuters Knowledge Direct API to return annual or interim balance sheet information for a company.
- **Income Statement** - An income statement is the financial statement of business that lists revenues, expenses, and net income for a given period. You can use the Thomson Reuters Knowledge Direct API to return annual or interim income sheet information for a company.
- **Cash Flow** - Cash flow is the amount of net cash generated by a business during a specific period. You can use the Thomson Reuters Knowledge Direct API to return annual or interim cash flow information for a company.



22.7.2 Unique Identifiers

Issuers

Thomson Reuters Report Numbers (RepNo) uniquely identify each issuer covered by Thomson Reuters. These numbers are generated and maintained by Thomson Reuters, do not change over time and are never re-used.

Certain procedures determine the handling of RepNo's in the case of mergers, acquisitions, divestitures etc. In general,

- ~ If a merger or acquisition involving two entities causes a new entity to be created, then both of the existing RepNo's are considered inactive, and the new entity is given its own unique RepNo.
- ~ If one of the original entities survive as the new, merged entity, then it retains the original RepNo.

Issues

Issue ID will uniquely identify each issue for a specific issuer. These numbers are generated and maintained by Thomson Reuters, do not change over time and are never re-used. To identify an issue uniquely within Standardized Financials, users need to use a combination of Report Number and Issue ID.

22.7.3 Dual Listed Companies

While Thomson Reuters collects information about multiple issues per company (i.e. shares outstanding, DPS for various classes of share etc), these multiple classes of share do not add to the total company count. An exception occurs to this rule when one company reports financials using two different accounting standards. This could happen, for example, for a non-US company with American Depository Receipts (ADRs) trading in the US and a local issue trading in its home exchange. If these two instruments are associated with financials using different accounting standards, then Thomson Reuters Fundamentals will contain two companies - one to represent each of the above examples. A similar dual listing (with different accounting standards) could occur with other pairs of countries, such as UK/Australia etc. Currently there are about 1,000 companies in the database that are dual listed in this manner. Users can use the country of exchange for each company to determine the origin of each version of the company.

22.7.4 Primary Issue and Exchange

Primary Issue

In cases where a company has multiple issues, various factors are taken into account in deciding what the primary issue is. These include whether or not the issue trades, the number of shares outstanding, float, trading volumes, voting power etc. This primary issue is always assigned Order number = 1. If the primary issue changes, the order number is reassigned. The Fundamentals API displays information (i.e. identifiers) on only the Primary Issue.

Primary Exchange

In cases where a company trades on multiple exchanges, Thomson Reuters assigns an exchange to be the primary exchange. This assignment is based on several factors including the accounting standard used by company, volume traded on each exchange etc. The exchange code and country code is given in the company-specific and standardized financials responses. Country codes used are ISO-3166 three character codes.

22.7.5 Periods and Filings

Thomson Reuters uses a certain concept to model periods and filings for companies. Users may choose to use a different model, but it is useful to understand the Thomson Reuters perspective when working with Thomson Reuters Financials files. While the file presents data in a three-tier hierarchy, users can think of four different entities:

- **Period** - A unique period can be identified by the combination of RepNo, PeriodType (e.g. Annual) and PeriodEndDate. For RepNo 12345, examples of unique periods include Annual 2003, Q3 2001 and Q1 1994.
- **Filing** - A filing is similar in concept to an actual document published by a company. A filing can be uniquely identified by the combination of RepNo and StatementDate.
- **PeriodFiling** - A PeriodFiling is a set of Statements that belong to the same Period and the same Filing. To uniquely identify a PeriodFiling, the user requires RepNo, PeriodType (e.g. Annual), PeriodEndDate and StatementDate. A PeriodFiling is a child of both a Period, and a Filing.
- **Statement** - A statement is a single Income Statement, a single Balance Sheet etc. An original Income Statement and its restatement are considered different statements. A unique statement is found by a key comprised of RepNo, PeriodType, PeriodEndDate, StatementDate and StatementType (e.g. Income Statement).



Period: RepNo + PeriodType + PeriodEndDate

Filing: RepNo + StatementDate

PeriodFiling: Period + Filing

Statement: PeriodFiling + StatementType

22.7.6 General Response Structure for All Financials

In the financials XML responses, the layout contains three of these four entities - Period, PeriodFiling and Statement. Each one of these is a child of the preceding entity.

Because of this more flat layout, items that belong to the Filing level are represented on the PeriodFiling level in the response XML.

Within the response XML, each of Period, PeriodFiling and Statement levels contain elements which describe the entire key (excluding RepNo), even though this introduces some redundancy in the response data. For example, the key for a Statement is PeriodType, PeriodEndDate, StatementDate and StatementType. While all Statements within the same Period will have the same PeriodEndDate, this information is still expressed within the Statement element.

The entities described above make use of a number of specific data items, which are defined below.

- **PeriodEndDate** - This is the date at which a fiscal period is considered to have ended for a company. A company may have Period End Dates of March 31, 2000, December 31, 2003 etc.
- **PeriodType** - This is the type of Period, specifically, an Annual or an Interim. For the purpose of this file, the file type implies the PeriodType. The combination of a PeriodEndDate and a PeriodType identifies a unique Period. For example, the Annual Period ending December 2002 is a different period from the Quarterly Period ending December 2002.
- **StatementDate** - This is the PeriodEndDate for the latest Period in a Filing such as a 10K. If the 2003 Annual Report for ABC Company has financials for periods ending 12/31/2002 and 12/31/2003, then the StatementDate is 12/31/2003. A press release with this same information has the same StatementDate. Note that this date is different (usually earlier) than the date a Filing first becomes available to the public (labeled 'SourceDate').
- **SourceDate** - This is the date that a Source (or Filing) became available to the public. If a company announces its 2003 results via a press release on 2/15/2004, then the SourceDate is 2/15/2004. If the financials are then filed with the SEC on 3/15/2004 then the SourceDate is 3/15/2004.
- **Source** - This is the source from which information is taken, for example a 10-K, 10-Q or a Press Release.
- **StatementType** - This is the type of statement, such as Income Statement, Balance Sheet, Statement of Cash Flows, Business Segment etc.

22.7.7 Period Lengths

Thomson Reuters does not restrict the number of interim periods a company may report per year, and therefore does not place restrictions on the length of each interim period. Each financial period is associated with a period length, expressed in months or weeks, depending on the company's reporting practices.

In some instances, particularly when companies make year-end-changes, companies may report overlapping financial periods. Thus, a company changing its year-ending month from November to December may report two interim reports, one ending in November and one ending in December, and each three months in length. Similarly, a company changing its year-end-month from June to September may report two interim periods ending in March, where one has a length of three months and the other has a length of six months.

The combination of PeriodEndDate and PeriodLength can be used to identify the amount of overlap between statements, if any.

22.7.8 Preliminary Statements

The Thomson Reuters Fundamentals database uses the concept of Preliminary Statements and Final Statements. Final Statements are those statements that are not expected to be changed or re-confirmed by the company. Usually these statements are derived from documents filed by the company with regulators or exchanges.



While Restatements and Reclassifications do change values within a statement, these are considered to be different Statements from the original Statement. A flag at the PeriodFiling level indicates whether a set of Statements within a PeriodFiling is considered Preliminary or Final.

Preliminary Statements are those statements that are considered preliminary in nature - it is expected that these will be replaced in the near future by another set of statements. In some instances the financial values are not changed - they are simply confirmed by an officially filed document. In most instances, preliminary statements are sourced from press releases.

22.7.9 Complete Statements

The Thomson Reuters Knowledge Direct Fundamentals API uses the concept of Complete and Partial Statements. A Statement is considered complete if the reporting company reports a specific set of data items for that Statement. If any one of these data items are missing, the Statement is considered Partial. A flag at the Statement level indicates whether any given Statement is Complete or Partial. The concept of Partial Statements was introduced in April 2004, and therefore all statements entered in the database prior to that are flagged Complete.

Users may make use of this concept in creating restrictions for analytic or display purposes. For example, users may choose not to display any Partial Statements, or may apply special logic when calculating ratios using Partial Statements.

In general, company documents filed with exchanges and/or regulators will have sufficient information to be tagged Complete. Most Partial statements will likely be sourced from press releases.

22.7.10 Restatements/Reclassifications

From December 1997 onwards, Reuters has collected and saved all originally reported and restated / reclassified financial statements provided by companies. Thomson Reuters Knowledge Direct Fundamentals API reports only the most recent version of financials information for each period.

22.7.11 Chart of Account (COA) Codes

This section contains details on chart of account (COA) codes.

22.7.11.1 Concept and Process

The concept of COA codes is utilized across various Thomson Reuters Fundamental APIs such as Company Specific Financials, Standardized Financials and Business and Geographic Segments (BGS). Thomson Reuters collects and stores every line item reported by a company directly on the income statement, balance sheet and statement of cash flow, and up to approximately 50 line items reported in business or geographic segment information.

Each of these items is then assigned a Chart Of Account (COA) code, which helps classify these various entries. For example, a utility company may report various line items related to Fuel Expenses. While all these items will be collected by Thomson Reuters, they will all be assigned the same COA code. Due to inherent differences among industries, one set of COA codes cannot be used effectively for all companies covered by Thomson Reuters Fundamentals.

For example, Interest Expense for a financial institution usually has a different meaning from Interest Expense for an industrial enterprise. Thomson Reuters therefore has created four sets of COA codes - one each for Banks, Industrials, Utilities and Insurance companies.

22.7.11.2 Uniqueness of COA Codes

The definition of each COA code is unique. Each statement within the Standardized Financials product may have only one occurrence of a COA code (e.g. 'Revenue' will appear only once in a given Income Statement). However, a COA code may appear multiple times within a statement in Company Specific Financials - see section Mapping to STD for examples.

Items with the same definitions in general have the same COA code in the STD and CSF APIs. The exception occurs for the list of codes below. For this list of codes, different codes are used to express the same item in the two products due to legacy compatibility issues.

- **COA Code Variance between Company-Specific and Standardized Financials**



Standardized Code	Company-Specific Code	Description
SBAS	GBAS	Basic Weighted Average Shares
SBBF	GBBF	Basic EPS Excluding Extraordinary Items
SBAI	GBAI	Basic EPS Including Extraordinary Items
SDAJ	GDAJ	Dilution Adjustment
SDNI	GDNI	Diluted Net Income
SDWS	GDWS	Diluted Weighted Average Shares
SDBF	GDBF	Diluted EPS Excluding Extraordinary Items
SDAI	GDAI	Diluted EPS Including Extraordinary Items

22.7.12 Mapping to STD

All line items collected by Thomson Reuters are displayed in the Thomson Reuters company-specific Financials. Thus, if an airline company reports three lines of 'Revenue', all of these are displayed through Company Specific Financials. Each of these line items are assigned a COA code as described above. In the above example, the three 'Revenue' items would all be assigned the same COA code.

• Sample Mapping of Company-Specific Items to Standard Items

Company-Reported Line Description	Assigned COA Code	Standardized Description
Passenger Revenue	RNTS	Revenue
Cargo Revenue	RNTS	Revenue
Charter Ops Revenue	RNTS	Revenue
Salaries/Benefits	ECOR	Cost of Revenue
Fuel/Oil	ECOR	Cost of Revenue
Aircraft Rentals	ECOR	Cost of Revenue
Landing Fees	ECOR	Cost of Revenue
Commissions	ECOR	Cost of Revenue

In the standardized display, each COA code appears only once. Thus, displays for all airline companies will show only one 'Net Sales' item - for the above example the three company specific line items would be aggregated to give a single standardized line item. This helps create a more standard display across various companies, and allows for easier cross-company comparison.

Note: Mapping from Company Specific to Standardized financials only involves grouping like items together. It is, therefore, always easy to reconcile Thomson Reuters Standardized Financials with the source documents.

22.7.13 Currencies

Up to three currencies may be relevant to each company. These are Pricing Currency (the currency that the primary issue of the company is priced in), the Reporting Currency (the currency that a financial report is originally reported in by the company) and the Converted To (i.e. published) Currency, which is the currency in which the xml files publish financial values.

Thomson Reuters Fundamentals collects all financial values in Reported Currency. The company-specific requests return all data in Reported Currency.

In the Standardized Financials API financials for each company are reported in one currency - the Most Recent Reporting Currency. Thus, a company reporting in USD or JP Yen in all of its history will have all its financials in USD or JP Yen respectively. But if a company changed its currency from Italian Lira to Euro at some point, then all its financials are presented in Euro.

For each period, the reporting currency, published currency and conversion rate is provided. The conversion rate is based on the exchange rate of the most recent period with the old (in above example, Lira) currency.

Currency codes used are ISO-4217 three character codes.



22.7.14 Exchange Rates

Up to three exchange rates may be expressed in financials responses.

The USDToRepExRate is the most recent exchange rate between the US Dollar and the most recently reported currency. If the value is x, then 1 USD = x Most Recent Reported Currency.

The PriceToRepExRate is the exchange rate between Pricing Currency and Most Recent Reporting currency. This rate is as of the most recent period end date (the date for which most recent price is provided). If the value is y, then 1 Pricing Currency = y Most Recent Reported Currency.

The RepToConvExRate is the exchange rate used to convert Reported Currency into ConvertedTo Currency. If the value is z, then 1 Reported Currency = z Converted Currency.

22.7.15 Units

Financial values in Standardized Financials (except per share values) are always converted to Millions for all periods. For company-specific Financials, all financials values are expressed in the unit of the most recent report. Thus, if company switches from reporting in millions to reporting in billions in its most recent set of financials, then all financials are converted to billions.

22.7.16 Footnote Items

In addition to presenting the information provided by companies in their financial statements, Thomson Reuters collects and displays a number of 'footnote' items in the CSF presentation. These items may include general information such as Number of Employees, footnote information such as number of Employees, number of common shareholders and frequently used information such as depreciation and amortization with the income statement.

22.7.17 Number of Shares

Basic vs. Primary

Many companies (depending on country accounting standards) are currently required to report two weighted average share numbers for EPS calculations: Basic shares and Diluted shares. However, historically (pre-1997) US companies used to report Primary and Fully Diluted share numbers which are similar, but not identical, concepts.

For display purposes the Financials API displays only one pair of share figures: 'Basic' and 'Diluted'. Note that prior to 1998, this item may reflect Primary and Fully Diluted Shares.

Timeliness of Share Counts

Companies provide share counts per issue on the Balance Sheet, and these are collected and displayed on a per issue basis. These share counts are as of the Balance Sheet date. The Income Statement provides share numbers that are an average of the period beginning and ending dates.

Companies also provide shares outstanding figures near the front of financial publications (e.g. Annual Reports) - these numbers are more current than the Balance Sheet figures, and are provided in the Thomson Reuters Knowledge Direct GetGeneralInformation_1 request. Usually Market Capitalization and related analytics are performed using this up-to-date number.

22.7.18 Creating a Display

All COA codes given in CSF financials may be displayed for users.

However, the line item map includes an attribute to indicate the type of each COA code that might assist users in creating views that hide or show certain COA codes. For example, footnote items may be set to a default of 'hide'.

Each COA code is assigned one of five display attributes. These are described below:

- Financial items collected from the face of the financial statements will carry a display attribute value of 'Regular'. Examples include Net Sales and Gross Revenue. 'Regular' line items should always be displayed.
- Commonly used items collected from footnotes and other sources will carry a display attribute value of 'Footnote'.



- Examples include 'Number of Employees' and 'Rental Expense, Supplemental'. These items may be hidden.
- Items used to calculate the Thomson Reuters Normalized earnings will carry a display attribute value of 'Normalized'. Examples include 'Normalized Income Before Taxes'.
- Items related to Extraordinary expenses as defined by US GAAP are given the attribute value of 'Extraordinary'. These items appear infrequently in financial statements, but should be displayed when they do appear.
- Items that are collected from the face of the financial statements (when available) but appear infrequently, and do not have a direct impact on the bottom line financial results (i.e. Net Income, Total Assets etc.) are given the value 'Supplemental'. Examples include 'Shares Outstanding - Preferred Stock 2', 'Shares Outstanding - Preferred Stock 3' etc.

22.8 Getting Financial Statements

Requests for company-specific financial statements look nearly identical to requests for standardized financial statements, with the exception of the method name and namespace. Company-Specific requests use the `<GetCompanySpecificFinancials_Request_1>` element, while standardized requests use the `<GetStandardFinancials_Request_1>` element. The type of financial statement requested (e.g. Annual Income Statement vs. Interim Cash Flow Statement) is specified in the `finStatement` attribute on the request element.

XML Sample Request - Getting a Company-Specific Statement (Annual Income Statement)

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Fundamentals/Fundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1/GetCompanySpecificFinancials_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetCompanySpecificFinancials_Request_1 xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1"
      finStatement="AIS"
      numPeriods="1"
      companyIdType="ticker"
      companyId="TRIN"
      countryCode=""
      startFY="0"
      endFY="0"
      fpNumber="0"
      coaCodes="All"
      displayTypes="All"
      updateType="MostRecent"
      completeStatement="AllStatements"
      finalFiling="AllFilings"
      showCompanyInfo="true"
      showIssues="true"
      showStatementInfo="true"
      showAvailability="true" />
  </Body>
</Envelope>
```

Compare the above company-specific request with the below request for a standardized cash-flow statement.

XML Sample Request - Getting a Company-Specific Statement (Annual Income Statement)

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Fundamentals/Fundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1/GetCompanySpecificFinancials_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetStandardFinancials_Request_1 xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1"
      finStatement="CashFlow"
      numPeriods="1"
      companyIdType="ticker"
      companyId="TRIN"
      countryCode=""
      startFY="0"
      endFY="0"
      fpNumber="0"
      coaCodes="All"
      displayTypes="All"
      updateType="MostRecent"
      completeStatement="AllStatements"
      finalFiling="AllFilings"
      showCompanyInfo="true"
      showIssues="true"
      showStatementInfo="true"
      showAvailability="true" />
  </Body>
</Envelope>
```




```

</Header>
<Body>
  <GetStandardFinancials_Request_1 xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1"
    finStatement="ICF"
    numPeriods="1"
    companyIdType="ticker"
    companyId="TRIN"
    countryCode=""
    startFY="0"
    endFY="0"
    fpNumber="0"
    coaCodes="All"
    displayTypes="All"
    updateType="MostRecent"
    completeStatement="AllStatements"
    finalFiling="AllFilings"
    showCompanyInfo="true"
    showIssues="true"
    showStatementInfo="true"
    showAvailability="true" />
</Body>
</Envelope>

```

22.8.1 companyIdType Attribute

Specifies the type of company identifier. Thomson Reuters recommends using RepoNo because it is the only truly unique type for identifying companies with fundamental data. The actual value is case-insensitive.

companyIdType Values for "Thomson Reuters"

Type	Description	Value Example
TICKER	Exchange ticker symbol	TRIN
RIC	Reuters Instrument Code	TRIN.O
REPONO	Unique ID for companies in the fundamentals API	B0867
VALOR	Swiss local security identifier	

22.8.2 companyId Attribute

The value of companyId is dependent upon the value specified in companyIdType attribute.

22.8.3 finStatement Attribute

The type of financial statement being requested. See the below table for an enumeration of values.

Enumeration of finStatement Attribute Values:

- **ABS** - Annual Balance Sheet
- **IBS** - Interim Balance Sheet
- **AIS** - Annual Income Statement
- **IIS** - Interim Income Statement
- **ACF** - Annual Cash Flow Statement
- **ICF** - Interim Cash Flow Statement

22.8.4 Limiting Number of Periods Returned

Financials requests provide a number of attributes for limiting the number of periods returned in the response.

- **numPeriods Attribute** - specifies the number of periods to report or value of 'All' to return all recorded periods. A positive number n indicates to return the n most recent periods of data. A negative value indicates to return the n earliest periods of data. The default value is 5.
- **startFY/EndFY Attributes** - Alternative to numPeriods, you can also use startFY and endFY to specify beginning and ending fiscal years. All periods between those years (inclusive) will be returned.
- **startDate/EndDate Attributes** - Another alternative to numPeriods is to use startDate and endDate. All periods between those dates (inclusive) will be returned. The date must be in the format 'YYYY-MM-DD'.

22.8.5 coaCodes Attribute

Controls which Chart of Account line-item values are returned in the response. To get all COA codes, specify value of 'All', which is also the default. To get only a small set of specific COA codes, specify the individual COA codes in a comma separated list (e.g. "AITL,LLTD,QEDG").

22.8.6 displayTypes Attribute

Alternative to coaCodes, you can use the displayTypes attribute to specify specific categories of COA codes to be returned. The allowable values are "Regular", "Supplemental", "Normalized", "Extraordinary", "Footnote", "Other". Multiple values can be specified in the form of a comma delimited list (e.g. "Regular,Footnote").

22.8.7 show* Attributes

The Company-Specific and Standardized financials requests contain a number of attributes that control the presence or absence of general reference and availability information in the responses. These attributes are boolean, so a value of '1' or 'true' indicates the corresponding element should be included in the response, while a value of '0' or 'false' indicates those elements to be left out of responses. See the below table for the elements controlled by each attribute.

show* Attributes and Corresponding Response Elements

Attribute	Element in Response
showCompanyInfo	CompanyInformation
showStatementInfo	StatementInfo
showIssues	Issues
showAvailability	Availability

22.8.8 updateType Attribute

Determines whether to return original filings, re-stated or re-classified filings, or both. The possible values are "Original" for original, un-restated filings, "MostRecent" for re-stated or re-classified filings, or "All" for all filings.

22.8.9 completeStatement Attribute

Determines whether to show partial statements, complete statements, or both. The possible values are "Partial", "Complete", or "All". For more information on partial vs. complete statements, see section Complete Statements.

22.8.10 finalFiling Attribute

Determines whether to show preliminary statements, final statements, or both. The possible values are "Preliminary", "Final", or "All". For more information on preliminary vs. final statements, see section Preliminary Statements.



22.9 Interpreting Financials Responses

The first part of this section will discuss those parts of the responses that are common to both Company-Specific and Standardized financials. The later sections will deal with items specific to the different APIs.

22.9.1 Response Overview

Financials responses contains two main sections: ReferenceInformation and FinancialInformation.

- **ReferenceInformation element** - this section contains information such as various identifiers for the company at both a company level (e.g. IRS Number) and issue level (e.g. CUSIP or ISIN). In addition, the section contains information on the company's most recent reported financials, active/inactive status, currency of reports etc. The section has three main sub-sections: CompanyInformation, Issues and StatementInformation. Reference Information is similar (in some cases identical) across various Thomson Reuters Fundamentals XML files.
- **FinancialInformation element** - FinancialInformation contains details about the periods and actual financial values for the company. It has three main sub-sections: Availability, FinancialsLayout and FinancialStatements. The FinancialStatements section contains the financial data compiled from various company documents. The layout of this section uses a number of concepts and implies a certain database structure described in detail in chapter Authentication and Authorization of this document.

22.9.2 CompanyInformation Element

The presence of the <CompanyInformation> element is dependent upon the value of the 'showCompanyInfo' attribute in the request. This section contains company level information including company name, type, company identifiers etc.

XML Sample - CompanyInformation Element

```
<CompanyInformation>
  <Company ActiveStatus="1" Name="Thomson Reuters PLC (ADR)" Type="EQU"></Company>
  <CompanyXref Type="CIKNo">0001430287</CompanyXref>
  <LastModified Financials="2008-05-15T07:47:18" Other="2008-05-15T07:47:18"></LastModified>
  <LatestFinancials Annual="2007-12-31"/>
  <ReportingCurrency Code="USD" ExRateDate="2008-05-14"USDToRepExRate="1.0">U.S. Dollars</ReportingCurrency>
</CompanyInformation>
```

- **ActiveStatus Attribute** - this flag indicates whether a company is active in the Thomson Reuters fundamental database. Thomson Reuters inactivates companies when they stop trading as the result of certain business events. These events include acquisitions, mergers, bankruptcy etc. The flag is derived from the status of the IssueActiveStatus for all issues that belong to the company. The Company ActiveStatus is Active if any one of the IssueActiveStatus flags are Active.
- **Type Attribute** - this indicates the type of capital structure a company has or the type of issues the company primarily trades. Note that the Thomson Reuters fundamental database primarily covers financial statement information for companies with publicly traded equity. The majority of companies trade Equity and a minority trade Debt Issues only, with the other types appearing infrequently. If a company trades more than one type of the stock, only the primary stock will be used to describe the company type.

Type Attribute Values

Code	Description	Note
EQU	EQUITY	Company trades common shares. Additionally, the company may have other types of securities such as debt and preferred stock issued.
DBT	Debt	IssueCompany has publicly traded debt but no common or preferred stock trading.
PRE	Preferred Issue	Company has preferred stock but no common stock trading.
IPO	Pre-IPO	Company has filed an IPO registration statement, but shares are not trading in the market.
LPT	Limited Partnership	Reserved for future use.
IDX	Index	Reserved for future use.
PVT	Private	Company is private.



- **CompanyXref element** - in general, users should use the RepNo to map to issuers (companies) with data from outside the Thomson Reuters data set, such as users- internal data or data from other vendors. Other than the Report Number, Reuters Knowledge Direct uses the following company identifiers (distinct from Issue identifiers, described later in this document):
 - IRSNo (US co's only): As reported by the Internal Revenue Service.
 - CIKNo (US co's only): Central Index Key as assigned by the SEC.
- **LastModified Element** - Time and date give indications to when a company was most recently updated in the Thomson Reuters Fundamentals database. Two distinct time/date values are provided.
The time/date associated with the 'Financials' attribute indicates an update done via the Financials data entry application. Updates to any financial figures (e.g. financials for a new period), issue specific details (e.g. share counts) company name and address, CUSIP and ticker/exchange are updated through this application.
Updates made through other applications (e.g. those that update company description, officer and director information etc) are reflected in the time/ date associated with the 'Other' attribute.
- **Latest Financials Element** - provides the period end dates for the latest available annual and interim financials for the company.
- **ReportingCurrency Element** - indicates the currency of the company's most recent financial report.
- **CurrentAuditor Element** - indicates the name and code for the company's current Auditor. This may be different from the Auditor on the most recent financial statement if company announces an auditor change between periods. Data for this item is expected to be available after Q3 2004.

22.9.3 Issues Element

Issues Element - this section provides Issue level information for the company's issues. While a company may have multiple issues (e.g. multiple classes of common, preferred) outstanding, some Thomson Reuters Knowledge Direct Fundamentals API requests (Company-Specific financials, Standardized financials, and Business and Geographic Segments) provide information on only one issue - the 'Primary' issue. Other methods (General Information, Ratios) provide information on all outstanding issues.

In cases where a company has multiple issues, various factors are taken into account in deciding what the primary issue is. These include whether or not the issue trades, the number of shares outstanding, float, trading volumes, voting power etc. In general, the primary issue is the company's Common issue that is most actively traded and that has the largest float.

The information in this section allows user to cross-reference the issues with some commonly used identifiers, and also get other basic information on the issue.

XML Sample - Issues Element

```
<Issues>
  <Issue Desc="Common Stock" ID="1" IssueActiveStatus="1" Order="1" Type="C">
    <IssueXref Type="Name">Ordinary Shares</IssueXref>
    <IssueXref Type="Ticker">TRIN</IssueXref>
    <IssueXref Type="RIC">TRIN.O</IssueXref>
    <Exchange Code="NASDAQ" Country="USA" Region="NA">NASDAQ</Exchange>
    <ListingType SharesPerListing="6.0">ADR</ListingType>
    <IssueDetails ConversionFactor="1.0" Float="188300000.0" ShsOut="190153372.0" Votes="1.0" />
  </Issue>
</Issues>
```

- **Issue Type, Order, IssueActiveStatus and ID Attributes** - Thomson Reuters tracks information on both common and preferred equity types, as well as on multiple classes of each type. Each of these issues is assigned an Order number, with the primary issue receiving an Order of 1. The order assigned to a specific issue may change over time. Thomson Reuters also assigns an Issue ID for each of an Issuer's issues. These Issue ID's do not change over time, and can be used to uniquely identify an issue in combination with the Report Number (RepNo). Each issue is also tagged with an attribute that indicates whether the issue is active or inactive. A company is deemed inactive if all of its issues are tagged inactive. The file also provides a company level active/inactive flag. Please note that the financial statement information is not issue specific, but is published at the company level.
- **ListingType Element** - Some company issues trade on multiple exchanges around the world. These cross exchange listings generally represent the same issue of stock, and therefore the same fundamental information. Thomson Reuters only tracks the listing on the primary exchange in these cases. However, certain cross border listings such as American



Depository Receipt's (ADR's) are stored as separate 'issuers' in the Thomson Reuters Fundamental database because regulatory bodies of certain markets require the disclosure of financial statements per local accounting. Each of these 'companies' has its own set of financial statements. In the Thomson Reuters database these companies will appear more than once - each 'issuer' with its own RepNo. A full list of companies that appear more than once in the database may be provided on request. Specifically, to meet the listing requirements in the US, companies have to file US GAAP financial statements in addition to the local accounting system or the International Accounting System (IAS) that they may be reporting for their local markets. For these companies, the US GAAP financial statements will be available from the 'Americas' or Global subscription. See also section Global Listings.

Listing Types Tracked by Thomson Reuters

Listing Type	Description
OSR	Ordinary Shares
ADR	American Depository Receipt
LDR	Level I ADR
ROF	Rule 144 shares
EDR	European Depository Receipt
CCR	Canadian Cross Listing
GSR	Global Share

- **MostRecentSplit Element** - If there has been a stock split since the company was first added to the Thomson Reuters database the most recent split date and split factor will be provided in the API. For example, a split factor of 2 indicates that a 2-for-1 stock split has occurred. When the stock split becomes effective, Thomson Reuters uses the split factor to adjust all per share and shares outstanding fields in the

22.9.4 StatementInfo Element

The StatementInfo element groups elements containing information about how the company treats certain statement information.

XML Sample - Statement Element

```
<StatementInfo>
  <COAType Code="IND">Industry</COAType>
  <BalanceSheetDisplay Code="CUR">Differentiates</BalanceSheetDisplay>
  <CashFlowMethod Code="IND">Indirect</CashFlowMethod>
</StatementInfo>
```

- **COAType Element** - As described in the section on COA Codes, Thomson Reuters categorizes companies in four different industry groups for the purposes of creating standardized financial reports. The Statement Information segment indicates which of these industry groups is being used for each company.

COAType Code and Element Text Element

Code	Description
IND	Industry
BNK	Bank
FIN	Insurance
UTL	Utilities

- **BalanceSheetDisplay Element** - This code indicates whether or not the company differentiates between current and long-term assets and liabilities. A Code value of 'CUR' indicates that the company differentiates between current and long-term assets and liabilities. A value of 'LNG' indicates that the company does not differentiate between current and long-term assets and liabilities.
When the Balance Sheet Display code is LNG (No differentiation), certain COA codes, e.g. ATCA (Total Current Assets), and LTCL (Total Current Liabilities) must be ignored, as there will not be any usage of these items in Non-differentiating Balance Sheets.
- **CashFlowMethod** - Statements of Cash Flow can be compiled using either the Indirect or Direct Method of presentation. A majority of companies use the Indirect Method of presentation. Items specific to companies using the Indirect Method are denoted by 'I' and items specific to companies using the direct method are denoted by 'D'.



22.9.5 Availability Element

This element gives the user an indication of what financial statements are available for each company.

At least one Annual Income Statement and Annual Balance Sheet will always be provided for every company available through the Thomson Reuters Standardized Financials API (Income statement will be available for every fiscal period - annual or interim, and at least one annual balance sheet will be available for every company). The Annual Cash flow and Interim Financials (I/S, B/S, C/F) are not always available. Therefore, we indicate in the files which of these four reports are available for each company. If the report is available the associated code will be '1'. If the report is not available the associated code will be '0'. There is a generic code for all the interim statements, if the associated code is '1', at least one of the interim reports will be available, if the associated code is '0', none of the interim reports are available and their associated codes will also be zero.

Note: These codes refer to all fiscal periods and not only the most current fiscal period. For example, the code for Annual Cash Flow will equal '1' even if the financial statement for the current period is not available for the current period but is available for a previous fiscal period.

22.9.6 FinancialsLayout Element

The Financials Layout section appears once per file. It contains three Layouts, one for each of Income Statement, Balance Sheet and Cash Flow. Its purpose is to lay out the order in which financial values will appear for each period. This map gives the line item COA code, description, LineID, the aggregation and precision levels, and the display type.

The MapItem elements in the layout section differ between the Company-Specific and Standardized financials APIs. For details on the MapItem element, see section Company-Specific Financials and section Standard Financials Responses.

22.9.7 Period Element

A Period contains all statements of the same period type (annual vs. interim) with the same Period End Date. This includes income statements, balance sheets, and cash flow statements, as well as original and re-stated/ re-classified reports.

The <Period> element includes the key for identifying a period within the file uniquely, i.e. the PeriodEndDate and PeriodType. The <Period> element has two main sub-elements - <PeriodHeader> and <PeriodFilings>.

22.9.8 PeriodHeader Element

The Period Header contains additional information about the period, including the Fiscal Year of the period, the interim type and interim number, and the 'true' fiscal month of the period. Interim type and number are only applicable to interim statements.

The Fiscal Year is the year the financial report is relating to. It is common industry practice, and Reuters Fundamentals policy, to assign the prior year as the fiscal year when a company's fiscal year ends between January 1st and January 15th. If the company's fiscal year ends between January 16th and December 31st, the fiscal year will be the current year. For example, if the fiscal period end date is 5 January 2003, the fiscal year will be 2002. If the fiscal period end date is 18 January 2003, the fiscal year is 2003.

Fiscal Period Number is only provided in the Interim reports to indicate which interim period the information refers to. For example, the first interim of a company's fiscal year would have a period number of one. Possible values are 1 through 4. Note that for companies with bi-annual reporting, interim numbers displayed are 2 and 4 (as opposed to 1 and 2 or 1 and 3).

In the June 2004 release (version 2.0.1), the interim type and 'true' fiscal month values will not be populated. Both values should be available later in 2004 or early 2005. Once interim type is made available, the numbering for interim number will be changed such that semi-annuals have values 1,2 and tri-annuals have values 1,2,3.

Period Length is not provided in this level because various statements within a Period may have different lengths (e.g. a 3-month Income Statement and 9-month Cash Flow). In addition, Period Length is not applicable to the Balance Sheet.

The Period Header will also provide information about period ending stock price when applicable. This is the most recent closing price for the primary issue of the company as of the Period End Date. Prices are provided in the currency quoted by the relevant exchange. Pricing information will not be available in the June 2004 release of the product, but is expected to be in products later in 2004.



22.9.9 PeriodFilings Element

A PeriodFiling contains all statements of the same period type (annual vs. interim) with the same Period End Date and same Statement End Date. One PeriodFiling may contain at most one income statement, one balance sheet and one cash flow statement.

The PeriodFiling element includes the key for identifying a period within the file uniquely, i.e. the PeriodEndDate, PeriodType and StatementDate.

A PeriodFiling element will have two main sub-elements - PeriodFilingHeader and Statements.

22.9.10 PeriodFilingHeader Element

Final Filing indicates whether all statements within a PeriodFiling are considered final (as opposed to preliminary). The Period Filing header indicates whether a period filing is Final or Preliminary.

The header contains the Original Announcement date. This date appears for period filings that were first initiated in the database as a Preliminary period filing. The date indicates the source date of the first preliminary report for that period filing. In effect indicates the first date when any information for that period filing was made available to the public. The date does not get overwritten even as the financial data gets overwritten by 'final' filings.

Auditor Name and Opinion are only supplied in the Annual Statements. The auditor (an independent certified public accountant) is responsible for ensuring that the financial reports of a company conform with GAAP accounting principles. Each Auditor provides a report on the company's accountants that contain an 'opinion'. The opinion code and description is provided in the XML files.

Opinion Values

Code	Description	Note
UNQ	Unqualified	The accounts represent a fair and true view of the financial situation of the company and comply with accounting principles.
UWE	Unqualified with Explanation	An explanation will be given if there are uncertainties in the accounts that will be resolved in the future, if the company has changed its accounting principles which in turn effect the comparability of the reports or if there is a material deemed important enough to mention.
AOP	Adverse Opinion	The accounts have not complied with generally accepted accounting principles.
NOP	No Opinion	Not enough information was provided to enable the auditor to express an opinion or the auditor refuses to express an opinion regarding the company's ability to sustain operations.
QUA	Qualified	The accounts have been presented fairly however, the scope of the examination is limited/affected by conditions or restrictions or the accounts do not give a fair view because of a lack of conformity with GAAP or inadequate disclosure.
UNA	Un-audited	

XML Sample - PeriodFilingHeader Element

```

<PeriodFilings>
  <PeriodFiling PeriodEndDate="2002-12-31" PeriodType="Annual" StatementDate="2003-12-31">
    <PeriodFilingHeader>
      <FinalFiling>1</FinalFiling>
      <Currencies ConvertedTo="GBP" RepToConvExRate="1.000000" Reported="GBP"></Currencies>
      <Units ConvertedTo="M" Reported="M"></Units>
      <Auditor Code="PWCL" Name="PricewaterhouseCoopers LLP" Opinion="Unqualified" OpinionCode="UNQ"></Auditor>
    </PeriodFilingHeader>
  </PeriodFiling>
  ...
</PeriodFilings>
...
```



22.9.11 Statement Element

A Statement contains one financial statement and all of its associated financial values. The <Statement> element includes the key for identifying a period within the file uniquely, i.e. the PeriodEndDate, PeriodType, StatementDate and StatementType.

The Statement Type identifies whether a statement is an Income Statement, Balance Sheet or Cash Flow Statement.

A <Statement> element will have two main sub-elements - <StatementHeader> and <FinancialValues>.

22.9.12 StatementHeader Element

The statement header contains information about whether statements are partial vs. complete, original vs. restated, as well details about the filing dates and accounting standards. The following sections detail the elements in the StatementHeader section of financials responses.

- **CompleteStatement Element** - The Statement Header includes information that identifies a statement as being either Complete or Partial. See 23.6.9, Complete Statements for more detail on how Reuters categorizes statements as partial or complete.
- **PeriodLength Element** - Period length and type are provided in the Income Statement and Cash Flow Statements. It indicates the length of the fiscal period of the financial report and states whether the length is in weeks or months. For example, an annual report could have 52 week fiscal period or a 12 month fiscal period.
Since the Balance Sheet is a snapshot of the company's assets and liabilities at one point in time, a period length is not applicable to this statement.
- **UpdateType Element** - A company can submit an original update to their financials, a reclassification or a restatement. When updating a company's information the Data Analysts have to choose from one of these three update options:
 - ~ **Normal Update** (first letter of update code is U) - the date is updated from the original financial report.
 - ~ **Reclassification** (first letter of update code is C) - this can occur when, for instance the company's auditor or accounting department discover that an item such as cost of revenue or accounts payable has been classified incorrectly. Reclassifications will generally change the breakdown within the major number, but leave the bottom line numbers, such as Net Income, Total Assets or Total Change in Cash unchanged.
 - ~ **Restatement** (first letter of update code is R) - this can occur, when for instance: an acquisition is made using the pooling-of-interest method of accounting; a sale of a division or a business (which would be accounted for as discontinued operations); a change in the company's accounting policies; there were errors in reporting procedures or in previously reported financials. Restatements will result in a change in the bottom line numbers - revenues, net income, total assets, net change in cash, etc.
The most common update types are Update Normal and Restated Normal.
- **UpdateType Possible Values**

Code	Description	Note
UPD	Update Note	Adding the most recent annual or quarterly data.
UCA	Update Calculated	The Data Analyst calculates the financials, deriving the information from existing reports, to enable an update. For example, if a company has only filed the 1st, and 3rd interim statements, the figures for the 2nd interim can be derived from these.
USP	Update Special	A company files financial reports that are not a of a standard length. For example, a newly listed company's first annual report may only be for ten months and not the standard twelve.
RES	Restated Normal	Restating a prior period using the most recent period's source document. For example, figures in the 2000 annual income statement are revised using the 2001 annual income statement.
RCA	Restated Calculated	The Data Analyst calculates the financials for a period as the result of a restatement.
RSP	Restated Special	Restating a period resulting in a non-standard filing length.
CLA	Reclassified Normal	Reclassifying a prior period using the most recent period's source document. For example, figures in the 2000 annual income statement are revised using the 2001 annual income statement.



CCA	Reclassified Calculated	The Data Analyst calculates the financials for a period as the result of a reclassification.
CSP	Reclassified Special	Reclassifying a prior period which results in a non standard period length.

- **Source and SystemDate Elements** - The Source Date is the date that the source documentation was filed by the company to the regulatory body or when a press release became available to the public. Various types of source documents are used to record company financials. The source document used for each period is also provided. The System date indicates what date a statement was first added to the Reuters Fundamentals database.
- **ReportedAccountingStandard Element** - This element indicates the code and description for the accounting standard used by the company. A list of accounting standards codes can be obtained by issuing a `GetFundamentalsReferenceListsRequest` request using a Category of "AccountingStandards".

XML Sample - StatementHeader Element

```
<StatementHeader>
  <CompleteStatement>true</CompleteStatement>
  <PeriodLength Code="M" Type="Months">12</PeriodLength>
  <UpdateType Code="CLA">Reclassified Normal</UpdateType>
  <Source Date="2004-02-17">20-F</Source>
  <SystemDate>2004-05-25</SystemDate>
  <ReportedAccountingStandard Code="USG">U.S. GAAP</ReportedAccountingStandard>
  <STECFlag>false</STECFlag>
</StatementHeader>
```

22.9.13 FinancialValues

The FinancialValues element contains the actual line item values for the COA codes found in the FinancialsLayout section. Actual line items are represented by FV elements. For details on the FV element, see section Making Company-Specific Financials Requests and section Making Standardized Financials Requests.

22.10 Company Specific Financials Responses

This section covers response details that are specific to the Company-Specific Financials API. For details on elements common to both Company-Specific and Standardized financials, please see section Interpreting Financials Responses.

22.10.1 MapItem Element (Company-Specific)

The 'MapItem' in the Company Specific Financials API is the company specific description of the line item (e.g. "Revenue from Passenger Operations"), and will match the description provided by the reporting company. In some instances descriptions may be abbreviated to fit limitations of some products. This is different from the Standardized financials API, where MapItem refers to a standardized description for a COA code.

LineIDs are unique IDs assigned to each item, and are used to link descriptions to financial values in each period. The assigned LineIDs Company Specific financials are applicable for all periods within the file, but may change when the company is next updated. The codes can be used to order the values for display purposes.

COA is the COA code (e.g. RREV) as described in the section above on Chart of Account (COA) Codes.

STDLineIDs are Summary Standardized LineIDs that can be used to create a summary display of Standardized Financials. For such a display all items with identical STDLineIDs would be aggregated to create STDLineID items.

For any given period, a company may or may not have values for each of the COA codes.

As discussed in the section on COA codes there are four Chart of Account templates: Industrial, Banking, Insurance and Utility, and each company is assigned one of these templates. Each company will therefore have one of four possible Financial Statement Maps.

Note: While each Financial Statement Map contains descriptions about each item that could be part of the template, not all



companies will have values for each item in the map for each period supplied. For example, some companies may report 'Inventories - Raw Materials (AIRM)' in one period, but not on a subsequent period. The STD Financials file will then contain a value for AIRM in some periods but not others. Similarly, a company may never report the item 'Inventories - Finished Goods'. In this case the item will still appear in the Financial Statement Map, but will not appear in any of the Fiscal Periods reported for the company.

XML Sample of Company Specific Financials Layout

```
<FinancialsLayout>
  <Layout Type="BAL">
    <MapItem COA="AITL" Display="Regular" LineID="1" STDLineID="AITL">Stocks</MapItem>
    <MapItem COA="AIWP" Display="Regular" LineID="2" STDLineID="AITL">Work in Progress</MapItem>
    <MapItem COA="AIOT" Display="Regular" LineID="3" STDLineID="AITL">Progress Payment</MapItem>
    ...[content elided]...
    <MapItem COA="QTSN1" Display="Supplemental" LineID="75" STDLineID="QTSN1">T/S-Common Stock</MapItem>
    <MapItem COA="QTPO" Display="Regular" LineID="76" STDLineID="QTPO">Total Preferred Shares Outstanding</MapItem>
    <MapItem COA="METL" Display="Footnote" LineID="79" STDLineID="METL">Employees</MapItem>
    <MapItem COA="MNOS" Display="Footnote" LineID="80" STDLineID="MNOS">Number of Common Shareholders</MapItem>
  </Layout>
</FinancialsLayout>
```

22.10.2 FV Element (Company-Specific)

In the Company Specific financials responses, the FV element contains the LineID attribute that maps the line item value to a MapItem in the Layout section. The FV element value is the value corresponding to the COA code for that line item. See section Mapping to STD for details on mapping between Company Specific and Standardized line items.

22.11 Get Standard Financials (GetStandardFinancials_1)

The following is an example on how to get standard financials:

XML Sample Request - Getting Standard Financials

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/2009/01/26/Fundamentals_1.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1/GetStandardFinancials_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    GetStandardFinancials_Request_1 xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1" finStatement="AIS"
    companyIdType="ticker" companyId="TRIN" countryCode="" lang="en-US" startFY="0" endFY="0" fpNumber="0"
    updateType="MostRecent" completeStatement="AllStatements" finalFiling="AllFilings" showCompanyInfo="false" showIssues="false"
    showStatementInfo="false" showAvailability="false" />
  </Body>
</Envelope>
```

The response returns the following information:

XML Sample Response - Getting Standard Financials

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1/GetStandardFinancials_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
```



```

xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <Date>2009-04-14T12:56:25.3036846Z</Date>
  <DoNotStore />
</CacheResponse>
<a:RelatesTo>7bd7f532f7a04a29bb12e732f0f3050d</a:RelatesTo>
</s:Header>
<s:Body>
  <GetStandardFinancials_Response_1 xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1">
    <StandardizedFinancials Major="2" Minor="0" Revision="1" xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/StandardFinancials_1">
      <RepNo>B0867</RepNo>
      <ReferenceInformation xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/CommonContent_1"></
ReferenceInformation>
      <FinancialInformation>
        <FinancialsLayout>
          <Layout Type="INC">
            <MapItem COA="RNTS" LineID="10" Level="det" Agg="2" Precision="1" Display="Regular">Net Sales</MapItem>
            <MapItem COA="RREV" LineID="20" Level="det" Agg="2" Precision="1" Display="Regular">Gross Revenue</MapItem>
            <MapItem COA="RSRT" LineID="30" Level="det" Agg="2" Precision="1" Display="Regular">Sales Returns and Allowances</
MapItem>
            <MapItem COA="REXT" LineID="40" Level="det" Agg="2" Precision="1" Display="Regular">Excise Tax Receipts</MapItem>
            <MapItem COA="SREV" LineID="100" Level="sum" Agg="1" Precision="1" Display="Regular">Revenue</MapItem>
            <MapItem COA="RINT" LineID="280" Level="det" Agg="2" Precision="1" Display="Regular">Interest Income, Non-Bank</
MapItem>
            <MapItem COA="RORE" LineID="290" Level="det" Agg="2" Precision="1" Display="Regular">Other Revenue</MapItem>
            <MapItem COA="SORE" LineID="300" Level="sum" Agg="1" Precision="1" Display="Regular">Other Revenue, Total</
MapItem>
            <MapItem COA="RTLRL" LineID="310" Level="both" Agg="1" Precision="1" Display="Regular">Total Revenue</MapItem>
            ...
            <MapItem COA="MTHG" LineID="4290" Level="both" Agg="1" Precision="1" Display="Metrics">Online Sales</MapItem>
            <MapItem COA="MRET" LineID="4300" Level="both" Agg="1" Precision="1" Display="Metrics">Retail</MapItem>
          </Layout>
        </FinancialsLayout>
      <FinancialStatements>
        <Period PeriodEndDate="2007-12-31" PeriodType="Annual">
          <PeriodHeader>
            <FiscalPeriod Year="2007" FiscalMonth="12"></FiscalPeriod>
          </PeriodHeader>
          <PeriodFilings>
            <PeriodFiling PeriodEndDate="2007-12-31" PeriodType="Annual" StatementDate="2007-12-31">
              <PeriodFilingHeader>
                <FinalFiling>1</FinalFiling>
                <OriginalAnnouncement>2008-04-17T21:27:00</OriginalAnnouncement>
                <Currencies ConvertedTo="USD" Reported="USD" RepToConvExRate="1.000000"></Currencies>
                <Units ConvertedTo="M" Reported="M"></Units>
              </PeriodFilingHeader>
              <Statements>
                <Statement PeriodEndDate="2007-12-31" PeriodType="Annual" StatementDate="2007-12-31" Type="INC">
                  <StatementHeader>
                    <CompleteStatement>1</CompleteStatement>
                    <Flash>0</Flash>
                    <PeriodLength Type="Months" Code="M">12</PeriodLength>
                    <UpdateType Code="UPD">Updated Normal</UpdateType>
                    <Source Date="2008-04-17">20-F</Source>
                    <OriginalAnnouncement>2008-04-17T21:27:00</OriginalAnnouncement>
                    <Document ID="10085415" IsInternal="0"></Document>
                    <SystemDate>2008-04-18</SystemDate>
                    <StatementLastUpdated>2008-05-30T13:46:19</StatementLastUpdated>
                    <ReportedAccountingStandard Code="USG">U.S. GAAP</ReportedAccountingStandard>
                    <Consolidated>1</Consolidated>
                    <STECFlag>0</STECFlag>
                  </StatementHeader>
                  <FinancialValues>
                    <FV COA="RNTS">12442.000000</FV>
                    <FV COA="SREV">12442.000000</FV>
                    <FV COA="RTLRL">12442.000000</FV>
                    ...
                    <FV COA="SBIT">1474.000000</FV>
                    <FV COA="SBDA">2920.000000</FV>
                  </FinancialValues>
                </Statement>
              </Statements>
            </PeriodFiling>
          </PeriodFilings>
        </Period>
      </FinancialStatements>
    </StandardizedFinancials>
  </GetStandardFinancials_Response_1>
</s:Body>

```



```

    </FinancialStatements>
  </FinancialInformation>
</StandardizedFinancials>
</GetStandardFinancials_Response_1>

</Body>
</Envelope>

```

For more information on the data returned by the response see the Standardized Financials Responses section.

22.12 Standardized Financials Responses

This section covers response details that are specific to the Standard Financials API. For details on elements common to both Company Specific and Standardized financials, please see section Interpreting Financials Responses.

22.12.1 MapItem Element (Standardized)

The MapItem is the standardized description of the COA code (e.g. 'Gross Revenue'), and will not match the description provided by the reporting company.

COA is the COA code (e.g. RREV) as described in the section above on Chart of Account (COA) Codes.

LineIDs in Standardized financials are pre-assigned to each COA code, and remain constant over time for each code. The codes can be used to order the values for display purposes.

The Level can be used to help create a summary standardized financials display. The 'level' can have one of three values: A value of 'det' indicates the detailed type of COA codes. These items are appropriate for a detailed view of financial statements and directly map to the line items reported by the companies. A value of 'sum' indicates the summarized type of COA codes, and should be used for a summary view of financial statements. A value of 'both' reflects items that may be reported by the companies or calculated by Thomson Reuters. Most displays of Thomson Reuters standardized data reflect only the line items at the 'sum' or 'both' levels.

The Aggregation level can be used in formatting the standardized display. The 'Agg' numbers can be used to determine the level of indentation, with 'Agg=1' values on the far left and 'Agg=3' values most indented.

The Precision number can be used to format the data items. This indicates the type of data item and can take the following values: '1' indicates financial values such as Net Sales or Current Assets. '2' indicates share amounts such as Total Shares Outstanding. '3' indicates per share values such as Dividends per Share. For any given period, a company may or may not have values for each of the COA codes. As discussed in the section on COA codes there are four Chart of Account templates: Industrial, Banking, Insurance and Utility, and each company is assigned one of these templates. Each company will therefore have one of four possible Financial Statement Maps.

Note: While each Financial Statement Map contains descriptions about each item that could be part of the template, not all companies will have values for each item in the map for each period supplied. For example, some companies may report 'Inventories - Raw Materials (AIRM)' in one period, but not on a subsequent period. The Standardized financials API will then contain a value for AIRM in some periods but not others. Similarly, a company may never report the item 'Inventories - Finished Goods'. In this case, the item will still appear in the Financial Statement Map, but will not appear in any of the Fiscal Periods reported for the company.

XML Sample of Standard Financials Layout

```

<FinancialsLayout>
  <Layout Type="INC">
    <MapItem Agg="2" COA="RNTS" Display="Regular" Level="det" LineID="10" Precision="1">Net Sales</MapItem>
    <MapItem Agg="2" COA="RREV" Display="Regular" Level="det" LineID="20" Precision="1">Gross Revenue</MapItem>
    ...[content elided]...
    <MapItem Agg="1" COA="VRXP" Display="Footnote" Level="both" LineID="1800" Precision="1">Rental Expense,
    Supplemental</MapItem>
    <MapItem Agg="1" COA="VEPS" Display="Footnote" Level="both" LineID="1810" Precision="1">EPS, Supplemental</MapItem>
  </Layout>
</FinancialsLayout>

```



22.12.2 Obtaining a List of All COA Codes

A complete list of line item codes can be obtained by issuing a GetFundamentalsReferenceLists_1 request: using a Category of "LineItems":

XML Sample Request - Obtaining a List of Line Item Codes

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Fundamentals/Fundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1/GetFundamentalsReferenceLists_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    GetFundamentalsReferenceLists_Request_1 xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1" Category="LineItems" />
  </Body>
</Envelope>
```

22.12.3 FV Element (Standardized)

In the Standardized financials responses, the FV elements map directly to standard chart of account (COA) codes, rather than to line item IDs in the Layout section. The COA attribute specifies the COA code and FV element text represents the statement line-item value corresponding to that COA code.

22.13 Get Ratios And Statistics (GetRatiosAndStatistics_1)

You can use the GetRatiosAndStatistics_1 request to generate ratios and statistics for a company. This request generates a wide range of both issue specific and company specific data.

XML Sample Request - Getting Ratios and Statistics

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Fundamentals/Fundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1/GetRatiosAndStatistics_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    GetRatiosAndStatistics_Request_1 xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1" companyIdType="TICKER" companyId="TRIN" countryCode="" />
  </Body>
</Envelope>
```

Note: countryCode only applies if a TICKER was chosen for companyIdType and the TICKER entered does not specify the location of the company.

For example, GetRatiosAndStatistics_1 request for Thomson Reuters (Ticker 'TRIN') returns the following:

XML Sample Response - Getting Ratios and Statistics



```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1/
    GetRatiosAndStatistics_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-14T12:56:25.3036846Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetRatiosAndStatistics_Response_1 xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1">
      <RatiosAndStatistics Major="1" Minor="0" Revision="1" xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/
      RatiosAndStatistics_1">
        <CoIDs xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/CompanyContentCommon_1">
          <CoID Type="RepNo">B0867</CoID>
          <CoID Type="CompanyName">Thomson Reuters PLC (ADR)</CoID>
          <CoID Type="CIKNo">0001056084</CoID>
        </CoIDs>
        <Issues xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/CompanyContentCommon_1">
          <Issue ID="1" Type="C" Desc="Common Stock" Order="1">
            <IssueID Type="Name">Ordinary Shares</IssueID>
            <IssueID Type="Ticker">TRIN</IssueID>
            <IssueID Type="RIC">TRIN.O</IssueID>
            <IssueID Type="DisplayRIC">TRIN.OQ</IssueID>
            <Exchange Code="NASDAQ" Country="USA">NASDAQ</Exchange>
            <GlobalListingType SharesPerListing="6.0">ADR</GlobalListingType>
          </Issue>
          <Issue ID="2" Type="C" Desc="Common Stock" Order="2">
            <IssueID Type="Name">Common Stock</IssueID>
            <Exchange Code="NYSE" Country="USA">New York Stock Exchange</Exchange>
          </Issue>
        </Issues>
        <CoGeneralInfo xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/CompanyContentCommon_1">
          <CoStatus Code="1">Active</CoStatus>
          <CoType Code="EQU">Equity Issue</CoType>
          <LastModified>2008-11-14</LastModified>
          <LatestAvailableAnnual>2007-12-31</LatestAvailableAnnual>
          <Employees LastUpdated="2008-04-17">50000</Employees>
          <SharesOut Date="2008-11-11" TotalFloat="816100000.0">824277974.0</SharesOut>
          <ReportingCurrency Code="USD">U.S. Dollars</ReportingCurrency>
          <MostRecentExchange Date="2008-11-21">1.0</MostRecentExchange>
        </CoGeneralInfo>
        <Ratios PriceCurrency="USD" ReportingCurrency="USD" ExchangeRate="1.00000">
          <IssueSpecific Order="1">
            <Group ID="Dividend">
              <Ratio FieldName="DIVNQ" Type="N">1.62000</Ratio>
              ...
              <Ratio FieldName="YIELD" Type="N">6.69600</Ratio>
            </Group>
            <Group ID="Growth Rates"></Group>
            ...
            <Group ID="Share Related Items">
              ...
            </Group>
            <Group ID="Short Interest">
              <Ratio FieldName="SICHG1" Type="N">-37.28800</Ratio>
              ...
              <Ratio FieldName="SIVOL4" Type="N">0.02700</Ratio>
            </Group>
          </CompanySpecific>
        </Ratios>
      </RatiosAndStatistics>
    </GetRatiosAndStatistics_Response_1>
  </s:Body>
</Envelope>

```

See section Interpreting Common Fundamental Elements for explanations on the CoIDs, Issues, and CoGeneralInfo elements.

The <Ratios/> element contains all the ratios, both issue specific and company specific. These values are broken into logical



groups, indicated by the <Group/> element. Each ratio is identified using a 'FieldName' attribute.

Note: The value '-99999.99000' means N/A (not available).

22.14 Getting a Company's Officers and Directors

The GetOfficersAndDirectors_1 request provides information about officers and directors of companies that are part of the Thomson Reuters coverage universe. Information includes officer names and titles, including historical titles, biographical information and compensation related information.

Officers and Directors data are compiled primarily from company filed documents, company web-sites and other company sources. This data is usually updated once a year, unless significant officer/director changes are announced. Officer and Director names and titles are collected for all companies that report such data (required reporting in the US).

Biographies are created, primarily using annual reports or an equivalent, for all officers where available. Biographical information is collected at the company level. Therefore, if John Lennon belongs to four companies - assuming each provided a biography - he will appear with four biographies. This is due to the uniqueness of each biography presented by the company an officer/director is affiliated with.

Each officer and director can be recognized via two identifiers, Person ID and Officer ID. This presents a two-tier structure for individuals within the Thomson Reuters People database. That is, person-level data and company-level data.

Person ID indicates a unique person within the Thomson Reuters People database. This ID will allow users to build unique relationships between individuals and view an officer/director's corporate affiliation and employment history. Note that Person ID will not change for a unique individual and is never reused.

Officer ID indicates a unique person within a company. The same officer/director will be assigned a different Officer ID in the context of a different company. Thus, if John Lennon is currently an officer of one company and director of two companies, and in addition is an ex-officer of a fourth company, he will appear with one Person ID and four Officer ID's in the file. Note that Officer ID will not change and is never reused. In addition, Officer ID should not be used to identify relationships between individuals and companies.

Remuneration related information is updated once a year and a new record is created even if there are no changes from the previous instance of this data. Information is collected at the company level and will be available for all companies in the Thomson Reuters Fundamental universe if provided in the source document. This information is available since 1997 for US markets and 2005 for non-US markets.

Title related information is updated, and new records are created, each time new information is made available. Thus, if John Lennon begins and ends his 5 year tenure at a company as CFO, there will only one 'title' record for this person. However, if within these 5 years there are changes to his title (e.g. he adds the title 'COO', and later transitions to role as 'CEO') then each of these changes will cause a new record to be created. For an inactive person, all sets of designations will have a valid 'end date'. For a current (active) person, one set of designations will have no end date.

Committee Membership information displays board committees as established by the company's bylaws, as well as memberships for each director and their title/date held. A committee enables a small group of relevant directors to focus on a specific issue and bring it to a resolution. Each committee performs a complementary function, permitting the board to address areas of corporate governance in more depth than may be possible within its own capacity. Therefore if ABC Corp. has three committees: Audit, Compensation and Executive, and John Lennon is a member of the Compensation Committee, both his title, membership and tenure will be provided.

The data available is for both active and inactive companies. Also, within each company, there may be information for current (active) persons and inactive (i.e. ex-officers and ex-directors). A person's status is clearly indicated by the 'Status' tag, which takes values of 'officer', 'director', 'both' or 'inactive'. Once a person becomes 'inactive', his information is no longer updated (e.g. Age remains static).

22.14.1 Get Officers And Directors (GetOfficersAndDirectors_1)

Requests for a company's officers and directors are made using the GetOfficersAndDirectors_1 request, which, like most fundamentals methods, specifies a company id and id type.

XML Sample Request - Getting Officers and Directors




```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Fundamentals/Fundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1/GetOfficersAndDirectors_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetOfficersAndDirectors_Request_1 xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1"
      companyId="IBM.N" companyIdType="RIC" />
  </Body>
</Envelope>

```

22.14.2 GetOfficersAndDirectors_Response_1 Element

Competitors responses, like most fundamentals methods, contain company-level and issue-level identifiers in addition to their main content. Please see section Interpreting Common Fundamental Elements for a description of these elements.

XML Sample Response - Getting Officers and Directors

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1/GetOfficersAndDirectors_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-14T12:56:25.3036846Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetOfficersAndDirectors_Response_1 xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1">
      <Officers Major="3" Minor="0" Revision="2" lang="en-US" xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/OfficersDirectors_1">
        <RepNo>4741N</RepNo>
        <CompanyName Type="Primary">International Business Machines Corp.</CompanyName>
        <Production Date="2008-05-19T17:05:38"></Production>
        <OfficersInformation>
          <Officer ID="28503" Status="Both" Rank="1" Active="1">
            ...
          </Officer>
          ...
          <Officer ID="28519" Status="Inactive" Active="0">
            ...
          </Officer>
        </OfficersInformation>
      </Officers>
    </GetOfficersAndDirectors_Response_1>
  </Body>
</Envelope>

```

22.14.2.1 OfficerInformation and Officer Elements

The OfficersInfo element is the main element of interest. This section contains all of the officers and directors related information. Information for each officer begins with an Officer ID tag. Each officer within each company is assigned a unique Officer ID. This ID does not change, and is not re-used. While an Officer ID indicates a unique person within a company, the same person will be assigned a different Officer ID in the context of a different company. In addition to Officer ID, the Person



ID will be presented as a separate element and will enable identification of the relationship between the individual and companies.

Officer Status indicates whether a person is an Officer, Director or Both. Officer Active indicates whether an officer and/or director is 1 (active) or 2 (inactive). If the individual no longer holds an Officer or Director title, their Officer Active will be 0 (inactive).

Active persons are ordered in the file by their rank. Each active person is ranked using a system of sub-ranks for each title (e.g. Chairman of the Board ranked higher than CEO, which in turn is ranked higher than VP). Inactive persons are not ranked in the OD file, and are ordered by their most recent End Date.

Person Active indicates whether an individual (person) is 1 (active) or 2 (inactive) and is derived from Officer Status and Company Status. If a person is active, all person-specific fields, will be updated regardless of Officer Active status. A person is "active" when at least one associated Officer ID is active, and the company associated with that Officer ID is active. If all associated Officer ID's are inactive or the Company Status for each active officer is inactive, then the Person Active will be 0 (inactive). Therefore, if a person belongs to two companies and one is inactive, the age will continue to be updated for both the active issue and the inactive issue.

When companies themselves are inactivated, no changes are made to the officer information contained in the database. Therefore Inactive companies will contain 'active' persons.

XML Sample - Officer Information Elements

```
<OfficersInformation>
  <Officer ID="28503" Status="Both" Rank="1" Active="1">
    <Person ID="28503" Active="1"></Person>
    <Submission Type="DEF 14A" Year="2007" Month="01" Day="31"></Submission>
    <Submission Type="DEF 14A" Year="2007" Month="03" Day="12"></Submission>
    <Submission Type="10-K" Year="2008" Month="02" Day="26"></Submission>
    <Submission Type="DEF 14A" Year="2008" Month="03" Day="10"></Submission>
    ...
  </Officer>
</OfficersInformation>
```

Each Officer element will also contain the following information divided up into sub_elements:

- Person Information
- Contact Information
- Corporate Affiliations
- Position Information
- Biographical Information
- Salary Information

22.14.2.2 Person Information

PersonInformation section contains information pertaining to the person's name, age (and date of birth), sex and educational background including certifications.

Note: Person-specific fields are maintained on an individual level - i.e. as reported in a company's latest source document that an officer is associated with. All fields within the "PersonInformation" container element will be maintained until a person's status becomes inactive.

PersonInformation contains elements for each of the following:

- Name
- Certifications
- Education

Name - Contains all information pertinent to an individual's name. Fields include first, middle, last and preferred name in addition to prefix and suffix. First and last name are required fields. Preferred name may include an officers/directors nickname and/or "western" name depending on their preference and origin.



Certifications - The certifications element will display a certificate obtained by a person during his/her lifetime. This information will not be linked to a date and will only display the certificate.

Education - This section provides information on the person's educational background. Fields include college, degree, major and graduation date, and will be listed per Degree record. If a person has multiple degrees from the same college, then two records are created.

XML Sample - Person Information Element

```
<PersonInformation>
  <LastModified Date="2008-04-11T03:10:29"></LastModified>
  <Name>
    <Info Type="LastName">Palmisano</Info>
    <Info Type="FirstName">Samuel</Info>
    <Info Type="Middle/Initial">J.</Info>
    <Info Type="Age">56</Info>
    <Info Type="Sex">M</Info>
  </Name>
  <EducationHistory>
    <Degree Order="1">
      <College ID="1144">John Hopkins University</College>
    </Degree>
  </EducationHistory>
</PersonInformation>
```

22.14.2.3 Contact Information

The ContactInformation element provides information on an officer's contact details. Fields include e-mail, messenger address, web-site, phone, fax, mobile number, and contact person. The "ContactInformation" container element is optional; therefore, an element/attribute will not be available if it is null.

XML Sample - Contact Information Element

```
<ContactInformation>
  <EMail>Thomas.Glocer@thomsonreuters.com</EMail>
  <Messenger>thomas.glocer.reuters.com@reuters.net</Messenger>
  <Website>http://thomas.glocer.ime.reuters.com</Website>
  <ContactPerson>
    <Contact Name="Jane Welch" Title="Executive Assistant"/>
  <PhoneNumbers>
    <Phone Type="MainPhone">
      <CountryPhoneCode>44</CountryPhoneCode>
      <CityAreaCode>20</CityAreaCode>
      <Number>75427711</Number>
    </Phone>
    <Phone Type="MainFax">
      <CountryPhoneCode>44</CountryPhoneCode>
      <CityAreaCode>20</CityAreaCode>
      <Number>75191210</Number>
    </Phone>
    <Phone Type="MobilePhone">
      <CountryPhoneCode>44</CountryPhoneCode>
      <CityAreaCode>79</CityAreaCode>
      <Number>90567711</Number>
    </Phone>
  </PhoneNumbers>
</ContactPerson>
</ContactInformation><PersonInformation>
```

22.14.2.4 Corporate Affiliations

CorporateAffiliations section provides information on an officer's corporate affiliations or relationships within companies on the Thomson Reuters Fundamental database. Fields include Report Number, Company Name, Officer ID and Title and will be listed



per Order record.

XML Sample - Corporate Affiliations Element

```
<CorporateAffiliations>
  <Affiliation Order="0">
    <Company RepNo="3526N" Name="Ford Motor Company" Active="1"></Company>
    <Officer ID="55653" Title="Chairman of the Board, President, Chief Executive Officer, Director" Active="0"></Officer>
  </Affiliation>
  <Affiliation Order="0">
    <Company RepNo="4625N" Name="Imperial Chemical Industries PLC (ADR)" Active="0"></Company>
    <Officer ID="117205" Title="Chairman of the Board" Active="0"></Officer>
  </Affiliation>
  <Affiliation Order="0">
    <Company RepNo="4741N" Name="International Business Machines Corp." Active="1"></Company>
    <Officer ID="28518" Title="Director" Active="0"></Officer>
  </Affiliation>
  <Affiliation Order="0">
    <Company RepNo="A493B" Name="Imperial Chemical Industries PLC" Active="0"></Company>
    <Officer ID="605085" Title="Chairman of the Board" Active="0"></Officer>
  </Affiliation>
</CorporateAffiliations>
```

22.14.2.5 Position Information

PositionInformation contains an element on each of the following items:

- Tenure Dates
- Titles
- Committee Memberships

Tenure Dates - Tenure dates indicate the length of service for this person with this company. Tenure may be indicated for an Officer, Director or both. The existence of an End Date indicates that the person is no longer an Officer (or Director) with the company.

Note: The date is not given in regular Date format (YYYYMMDD) because some components of the date (e.g. the Day) may not be available. In some instances the Start Year may also not be available to Thomson Reuters. In such instances Start Year is populated with the string NA.

Titles - The Titles section details the various titles a person has held with a company, over time. Each Designation has a Start date, may have an End date, has a Long Title as reported by the company, and up to four titles. Thus a company may report a person's most recent title as 'Chairman of the Board and Chief Executive Officer'. This will appear as the Long Title. The person will also be tagged with two 'title ID's': CHM =Chairman and CEO = Chief Executive Officer. If available, this title will also have a Start date. However, as the most current title, this will not have an End date. If this person was previously a VP of the company, then there will be another Designation record in the file. This could have a Long Title of Vice President and a title ID VP=Vice President. As this is not the most current title, this designation will have an End date.

Committee Memberships - This section details the various board committees a director sits on. Fields include committee, title and start/end date.

XML Sample - Position Information Element

```
<PositionInformation>
  <TenureDates>
    <OfficerStart Year="1997"></OfficerStart>
    <DirectorStart Year="2000" Month="07" Day="25"></DirectorStart>
  </TenureDates>
  <Titles>
    <Designation>
      <Start Year="2003" Month="01" Day="01"></Start>
      <LongTitle>Chairman of the Board, President, Chief Executive Officer</LongTitle>
      <Title Order="0" ID="CHM">Chairman</Title>
      <Title Order="1" ID="DRC">Director</Title>
    </Designation>
  </Titles>
</PositionInformation>
```



```

        <Title Order="2" ID="PRE">President</Title>
        <Title Order="3" ID="CEO">Chief Executive Officer</Title>
    </Designation>
    ...
    <Designation>
        <Start Year="1997"></Start>
        <End Year="2000" Month="07" Day="25"></End>
        <LongTitle>Senior Vice President and Group Executive</LongTitle>
        <Title Order="0" ID="SVP">Senior Vice President</Title>
    </Designation>
</Titles>
<CommitteeMemberships>
    <Committee>
        <CommitteeName ID="4">Executive</CommitteeName>
        <Title>Chairman</Title>
    </Committee>
</CommitteeMemberships>
</PositionInformation>

```

22.14.2.6 Biographical Information

This section provides an officer's biography. Information is collected for all companies on the Thomson Reuters Fundamental database where available and is unique per company.

XML Sample - Biographical Information Element

```

<BiographicalInformation>
  <Text Type="Biography">Samuel J. Palmisano is chairman of the Board, president and chief executive officer of IBM and chairman of IBM's Executive Committee. Mr. Palmisano joined IBM in 1973. He was elected senior vice president and group executive of the Personal Systems Group in 1997, senior vice president and group executive of IBM Global Services in 1998, senior vice president and group executive of Enterprise Systems in 1999, president and chief operating officer in 2000, chief executive officer in 2002 and chairman of the Board in 2003. Mr. Palmisano is a director of Exxon Mobil Corporation. Mr. Palmisano became an IBM director in 2000.</Text>
</BiographicalInformation>

```

22.14.2.7 Salary Information

This section contains information about an officers' remuneration, both salary (CompensationInformation) and stock options related (OptionsInformation). The information is provided on a periodic basis, with a period end date identifying each period.

The currency for the reported remuneration is provided with the tag CompensationCurrency. This currency may change over time. Non-stock option related compensation is listed under Compensation.

For stock options, number of options and value is listed for Exercised', 'Unexercised-Exercisable', and 'Unexercised-unexercisable'.

XML Sample - Salary Information Element

```

<SalaryInformation>
  <CompensationPeriod EndDate="2007-12-31">
    <Submission Type="DEF 14A" Year="2008" Month="03" Day="10"></Submission>
    <CompensationCurrency>USD</CompensationCurrency>
    <CompanySpecificCompensation>
      <CompensationInformation>
        <Compensation COA="SAL" Line="Salary">620417</Compensation>
        <Compensation COA="BON" Line="Bonus">220000</Compensation>
        <Compensation COA="TAC" Line="Total Annual Compensation">840417</Compensation>
        <Compensation COA="RSA" Line="Restricted Stock Awards">446201</Compensation>
        <Compensation COA="AOC" Line="All Other Compensation">102778</Compensation>
        <Compensation COA="AOC" Line="Change in Pension Value">748545</Compensation>
        <Compensation COA="AOC" Line="Change in Retention Plan Value">541037</Compensation>
        <Compensation COA="AOC" Line="Market Priced Options">33531</Compensation>
        <Compensation COA="AOC" Line="Non-Equity Incentive Plan Compensation">1066400</Compensation>
      </CompensationInformation>
    </CompanySpecificCompensation>
  </CompensationPeriod>
</SalaryInformation>

```



```

    <Compensation COA="AOC" Line="Performance Share Units">1325988</Compensation>
    <Compensation COA="AOC" Line="Premium Priced Options">796085</Compensation>
    <Compensation COA="AOC" Line="Restricted Stock Units">736847</Compensation>
    <Compensation COA="TLC" Line="Total Long Term Compensation">5797412</Compensation>
    <Compensation COA="FYT" Line="Fiscal Year Total Compensation">6637829</Compensation>
  </CompensationInformation>
</CompanySpecificCompensation>
<StandardizedCompensation>
  <CompensationInformation>
    <Compensation COA="SAL" Type="Salary">620417</Compensation>
    <Compensation COA="BON" Type="Bonus">220000</Compensation>
    <Compensation COA="TAC" Type="Total Annual Compensation">840417</Compensation>
    <Compensation COA="RSA" Type="Restricted Stock Awards">446201</Compensation>
    <Compensation COA="AOC" Type="All Other Compensation">5351211</Compensation>
    <Compensation COA="TLC" Type="Total Long Term Compensation">5797412</Compensation>
    <Compensation COA="FYT" Type="Fiscal Year Total Compensation">6637829</Compensation>
  </CompensationInformation>
</StandardizedCompensation>
<OptionsInformation>
  <Option Type="Exercised">
    <Number>1466</Number>
    <Value>76261</Value>
  </Option>
</OptionsInformation>
</CompensationPeriod>
</SalaryInformation>

```

22.15 Getting a Company's Competitors

The Thomson Reuters Knowledge Direct API allows users to find out about the competitors of companies traded in the major US exchanges only. As of April 2004, there were over 11,000 US active and inactive companies with reported competitor information.

22.15.1 Get Competitors (GetCompetitors_1)

Requests for a company's major competitors are made using the GetCompetitors_1 request, which, like most fundamentals methods, uses a company id and id type.

XML Sample Request - Getting Company's Competitors

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Fundamentals/Fundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1/GetCompetitors_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetCompetitors_Request_1 xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1" companyId="IBM"
      companyIdType="ticker" />
  </Body>
</Envelope>

```

Note: countryCode only applies if a TICKER was chosen for companyIdType and the TICKER entered does not specify the location of the company.

22.15.2 GetCompetitors_Response_1 Element

Competitors responses, like most fundamentals methods, contain company-level and issue-level identifiers in addition to their

main content. Please see section Interpreting Common Fundamental Elements for a description of these elements.

XML Sample Response - Getting Company's Competitors

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1/GetCompetitors_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-14T12:56:25.3036846Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetCompetitors_Response_1 xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1">
      <Competitors Major="1" Minor="0" Revision="1" xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/Competitors_1">
        <CoIDs xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/CompanyContentCommon_1">
          <CoID Type="RepNo">4741N</CoID>
          <CoID Type="CompanyName">International Business Machines Corp.</CoID>
          <CoID Type="IRSNo">130871985</CoID>
          <CoID Type="CIKNo">0000051143</CoID>
        </CoIDs>
        <Issues xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/CompanyContentCommon_1">
          ...
        </Issues>
        <CoGeneralInfo xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/CompanyContentCommon_1">
          ...
        </CoGeneralInfo>
        <CompetitorsInfo LastModified="2008-01-08T01:04:19.433">
          <Competitor Order="1">
            <CompID Type="RepNo">4302N</CompID>
            <CompID Type="CompanyName">Hewlett-Packard Company</CompID>
            <CompID Type="Ticker">HPQ</CompID>
            <CompCoType Code="EQU">Equity Issue</CompCoType>
            <CompCoStatus Code="1">Active</CompCoStatus>
          </Competitor>
          ...
          <Competitor Order="19">
            <CompID Type="RepNo">A17C8</CompID>
            <CompID Type="CompanyName">Applied Micro Circuits Corporation</CompID>
            <CompID Type="Ticker">AMCC</CompID>
            <CompCoType Code="EQU">Equity Issue</CompCoType>
            <CompCoStatus Code="1">Active</CompCoStatus>
          </Competitor>
          ...
          <Competitor Order="9">
            <CompID Type="RepNo">57840</CompID>
            <CompID Type="CompanyName">Microsoft Corporation</CompID>
            <CompID Type="Ticker">MSFT</CompID>
            <CompCoType Code="EQU">Equity Issue</CompCoType>
            <CompCoStatus Code="1">Active</CompCoStatus>
          </Competitor>
        </CompetitorsInfo>
      </Competitors>
    </GetCompetitors_Response_1>
  </s:Body>
</Envelope>
```

The <Competitor> element is the container element for each competitor of the company. The order number is assigned based on the original entry of the competitor company. For example, if a competitor company is added in the order of 2 (order = 2), but it is no longer competing with the company, then you will see the competitor companies 1, 3, 4,... But there will not be any competitor company order = 2.

The real order of the competitors is based on the size of their market caps and/or revenues.

Note: The order of Competitor nodes in the response XML does not necessarily follow the numeric sort order of the Order attribute value.



CompID Element - There are currently four identifiers used for each competitor where available. These id types are Repo Number, Company Name, Ticker and Symbol. Competitors can contain information about private, non-trading companies, in which case the API will show empty elements for all identifiers except RepNo and CompanyName.

CompCoType - This element indicates the type of capital structure a competitor has or the type of issues the competitor company primarily trades.

22.16 Getting a List of Major Customers

The Thomson Reuters Knowledge Direct API provides access for a limited set of companies to names of major customers and revenue attributable to these customers. As of November, 2003, approximately 10%-15% of companies covered in the Thomson Reuters fundamentals database have reported information about their major customers. Many companies will not have this data available.

22.16.1 Get Major Customers (GetMajorCustomers_1)

Requests for a company's major customers are made using the GetMajorCustomers_1 request element, which, like most fundamentals methods, uses a company id and id type.

XML Sample Request - Getting a List of Major Customers

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Fundamentals/Fundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1/GetMajorCustomers_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetMajorCustomers_Request_1 xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1" companyId="IBM.N" companyIdType="RIC" />
  </Body>
</Envelope>
```

22.16.2 GetMajorCustomers_Response_1 Element

Major customers responses, like most fundamentals methods, contain company-level and issue-level identifiers in addition to their main content.

Please see section Interpreting Common Fundamental Elements for a description of these elements. The MCInformation element contains information about attributable customer revenues for each period for which revenue information is available. The detail for a particular period is contained within a FiscalPeriod element.

XML Sample - FiscalPeriod Element Containing Customer Details

```
<FiscalPeriod EndDate="2002-12-31" FiscalYear="2002" Type="Annual">
  <FPHeader>
    <PeriodLength>12</PeriodLength>
    <PeriodType Code="M">Months</PeriodType>
    <UpdatedType Code="UPD">Updated Normal</UpdatedType>
    <StatementDate>2002-12-31</StatementDate>
    <Source Date="2003-06-30">20-F</Source>
  </FPHeader>
  <CustomerDetails>
    <CustomerOrderNumber Name="Infineon Technologies, Inc." Percent="21.900563" Revenue="15.448000">1</CustomerOrderNumber>
    <CustomerOrderNumber Name="Semiconductor Component Industries, Ltd." Percent="19.900194" Revenue="14.037000">2</CustomerOrderNumber>
  </CustomerDetails>
</FiscalPeriod>
```



```

CustomerOrderNumber>
<CustomerOrderNumber Name="Texas Instruments, Inc." Percent="18.499511" Revenue="13.049000">3</
CustomerOrderNumber>
<CustomerOrderNumber Name="Philips Components Philippines, Inc." Percent="8.999532" Revenue="6.348000">4</
CustomerOrderNumber>
<CustomerOrderNumber Name="Fairchild Semiconductor" Percent="7.000581" Revenue="4.938000">5</CustomerOrderNumber>
<CustomerOrderNumber Name="Total Revenue" Percent="100.000000" Revenue="70.537000">0</CustomerOrderNumber>
</CustomerDetails>
</FiscalPeriod>

```

22.16.3 FPHeader Element

Thomson Reuters collects both originally reported and revised (or restated) data. However, the GetMajorCustomers_1 request only displays the most recent (restated) data. Any given period can therefore be uniquely identified using the combination of Fiscal Period EndDate Date.

Major Customer data is collected only on an annual basis. The Fiscal Period Header section described here is common across various Thomson Reuters financials APIs, and has the flexibility to accommodate information about interim (quarterly) periods. Users of Major Customers information can ignore references to interim periods, because for Major Customers responses, all referenced periods will be of type 'Annual'.

22.16.4 CustomerDetails Element

This section provides the names of customers and respective revenues associated with each customer. In some instances, customer 'names' are proxies such as 'Customer A', 'Customer B' etc.

CustomerOrderNumber Element - The CustomerOrderNumber element indicates the order that each segment is reported in by the company.

Name Attribute - The Name attribute indicates the name of the customer as provided by the company. In many cases this includes actual customer name - in some cases the company is reported anonymously, and so it is a proxy for the customer name (e.g. Customer A).

Revenue Attribute - The Revenue attribute specifies the revenue attributable to the customer, as reported by the reporting company.

Percent Attribute - The Percent attribute specifies the percent of total company revenue attributed to the customer.

22.17 Getting a Detailed Company Description

The GetLongCompanyDescription_1 request of the Thomson Reuters Knowledge Direct API provides a detailed business description about companies, including information about the company's current operations, history, its different divisions and products, and the markets it serves. The information is primarily collected from annual reports, with periodic updates to reflect substantial changes in the company's business during the year.

A more concise description, the Thomson Reuters Short Business Description can be obtained via the GetGeneralInformation_1 request.

22.17.1 Get Long Company Description (GetLongCompanyDescription_1)

Requests for general company information are made using the GetLongCompanyDescription_1 request, which, like most fundamentals methods, uses a company id and id type.

XML Sample Request - Getting Long Company Description

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Fundamentals/Fundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
  
```




```

<Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1/
GetLongCompanyDescription_1</Action>
<Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
  <ApplicationID>[AppID]</ApplicationID>
  <Token>[service token]</Token>
</Authorization>
</Header>
<Body>
  <GetLongCompanyDescription_Request_1 xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1"
    companyId="IBM.N" companyIdType="RIC" />
</Body>
</Envelope>

```

22.17.2 GetLongDescription_Response_1 Element

Long description responses, like most fundamentals methods, contain company-level and issue-level identifiers in addition to their main content. Please see section Interpreting Common Fundamental Elements for a description of these elements.

IndustryInfo Element - This section contains information about the Thomson Reuters assigned industry and sectors that the company belongs to. It is similar to the industry information provided in the peerInfo element of GetGeneralInformationResponse.

XML Sample - IndustryInfo Element

```

<IndustryInfo>
  <Industry Type="MGINDUSTRY" Code="0909" Mnem="SVSBUS">Business Services</Industry>
  <Industry Type="MGSECTOR" Code="09" Mnem="SERVIC">Services</Industry>
</IndustryInfo>

```

Text Element - The Text element contains the long business description for the company.

XML Sample - Text Element

```

<Text LastModified="2008-01-03" SourceFilingDate="2007-02-27" SourceFilingType="10K; PRS; PRS">International Business Machines Corporation (IBM), incorporated on June 16, 1911, is an information technology (IT) company. IBM also provides business, technology and consulting services. The Company's major operations comprise a Global Services segment, a Systems and Technology Group, a Software segment and a Global Financing segment. IBM's business comprises three principal business segments: Systems and Financing, Software and Services. The majority of the Company's enterprise business, which excludes the Company's original equipment manufacturer (OEM) technology business, occurs in industries that are broadly grouped into six sectors: financial services (banking, financial markets and insurance), public (education, government, healthcare and life sciences), industrial (aerospace, automotive, defense, chemical and petroleum and electronics), distribution (consumer products, retail, travel and transportation), communications (telecommunications, media and entertainment, and energy and utilities) and small and medium business (mainly companies with less than 1,000 employees). ....
....
</Text>

```

22.18 Getting General Company Information

Requests for General Company Information have been created to meet the demands of users who wish to use and display non-financial information such as company contact information, related industries, hyperlinks of related web content, and descriptive company information.

22.18.1 Get General Information (GetGeneralInformation_1)

Requests for general company information are made using the GetGeneralInformation_1 request, which, like most fundamentals methods, specifies a 'companyId' and 'idType'. In addition, a country code can be specified as well as the option to include or exclude the company's reference information. See section Getting Company Reference Information for more information.

The following example passes RIC id for IBM and requests to return reference information in the response by setting <ShowReferenceInformation> to 'true'.

XML Sample Request - Getting General Information

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Fundamentals/Fundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1/GetGeneralInformation_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetGeneralInformation_Request_1 xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1"
      companyId="IBM.N" companyIdType="RIC" lang="en-US" ShowReferenceInformation="true" />
  </Body>
</Envelope>
```

22.18.2 GetGeneralInformation_Response_1 elements

The response for GetGeneralInformation_1 request returns the following information in the GeneralInformation element:

- Industry Classification
- General Information
- Issue Information
- Contact Information
- Web links
- Descriptive sections
- Advisors
- Officers

If <ShowReferenceInformation> is set to 'true' in the request the response will also contain the company reference information (see section Getting Company Reference Information for more details).

XML Sample Response - Getting General Information

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1/GetGeneralInformation_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-14T12:56:25.3036846Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetGeneralInformation_Response_1 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
      xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1">
      <ReferenceInformation Major="3" Minor="0" Revision="1" xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/ReferenceInformation_1">
        <RepNo>4741N</RepNo>
        <Production Date="2008-01-26T21:59:55" />
        <CompanyInformation>
          <CompanyXrefs>
            <CompanyXref Type="IRSNo">130871985</CompanyXref>
            ...
            <CompanyName Type="Primary">International Business Machines Corp.</CompanyName>
          </CompanyXrefs>
        </ReferenceInformation>
      </GetGeneralInformation_Response_1>
    </s:Body>
  </s:Envelope>
```



```

<CompanyStatus>
...
</CompanyStatus>
<CompanyUpdates>
...
</CompanyUpdates>
<Currencies>
...
</Currencies>
<IndustryClassification>
  <Taxonomy Type="RBSS2004">
    <Detail Order="1" Code="57211" Description="IT Services & Consulting" />
  </Taxonomy>
  ...
  <Taxonomy Type="MGINDUSTRY">
    <Detail Order="1" Code="0909" Mnemonic="SVSBUS" Description="Business Services" />
  </Taxonomy>
</IndustryClassification>
</CompanyInformation>
<IssueInformation>
  <Issue ID="1" Type="C" Order="1">
    ...
  </Issue>
  <Issue ID="2" Type="P" Order="1">
    ...
  </Issue>
</IssueInformation>
</ReferenceInformation>
<GeneralInformation Major="3" Minor="0" Revision="1" xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/
GeneralInformation_1">
  <RepNo>4741N</RepNo>
  <CompanyName Type="Primary">International Business Machines Corp.</CompanyName>
  <Production Date="2008-05-19T10:45:48" />
  <IndustryClassification>
    <Taxonomy Type="RBSS2004">
      <Detail Order="1" Code="57211" Description="IT Services & Consulting" />
    </Taxonomy>
    <Taxonomy Type="NAICS1997">
      <Detail Order="1" Code="541611" Description="Administrative Management and General Management Consulting Services" />
    </Taxonomy>
    ...
    <Detail Order="10" Code="334119" Description="Other Computer Peripheral Equipment Manufacturing" />
  </IndustryClassification>
  <IndexMemberships>
    <ConstituentOf IndexRIC=".DJI">Dow Industry</ConstituentOf>
    <ConstituentOf IndexRIC=".GSPC">S&P 500</ConstituentOf>
  </IndexMemberships>
  <CompanyGeneralInfo>
    <Employees LastUpdated="2007-12-31">386558</Employees>
    <TotalSharesOut Date="2008-03-31" TotalFloat="1365000000.0">1373478587.0</TotalSharesOut>
    <IncorporatedIn Date="1911-06-16" Country="USA">NY</IncorporatedIn>
  </CompanyGeneralInfo>
  <IssueInformation>
    <Issue ID="1" Type="C" Order="1">
      <IssueDetails ParCurrency="USD" ParValue="0.2" ShsAuthorized="4.6875E+09" ShsOut="1.37347853E+09" ShsOutDate="2008-03-
31" Float="1.365E+09" Votes="1" ConversionFactor="1" />
    </Issue>
    <Issue ID="2" Type="P" Order="1">
      <IssueDetails ParCurrency="USD" ParValue="0.01" ShsAuthorized="1.5E+08" ShsOut="0" ShsOutDate="2008-03-31" />
    </Issue>
  </IssueInformation>
  <ContactInfo LastUpdated="2008-04-29T17:13:54">
    <Address>
      ...
    </Address>
    <ContactPerson>
      ...
    </ContactPerson>
    <PhoneNumbers>
      ...
    </PhoneNumbers>
  </ContactInfo>
  <WebLinksInfo LastUpdated="2008-02-27T09:14:48">
    <WebSite Type="Home Page">http://www.ibm.com/</WebSite>
  </WebLinksInfo>

```



```

<WebSite Type="Investor Relations">http://www.ibm.com/investor/?cm_re=col-_link-_investor</WebSite>
<WebSite Type="Financial Information">http://www.ibm.com/investor/filings/index.phtml</WebSite>
<WebSite Type="Corporate History/Profile">http://www.ibm.com/investor/company/index.phtml</WebSite>
<WebSite Type="Executives">http://www.ibm.com/investor/corpgovernance/cgmgmt.phtml</WebSite>
<WebSite Type="Products/Services">http://www.ibm.com/sandbox/homepage/version-b/</WebSite>
<WebSite Type="Employment Opportunities">http://www-03.ibm.com/employment/</WebSite>
</WebLinksInfo>
<TextInfo>
<Text Type="Business Summary" LastUpdated="2008-04-29T21:08:17" lang="en-US" SourceFilingDate="2008-01-02T00:00:00"
SourceFilingType="PRS; PRS; PRS">International Business Machines Corporation (IBM) is an information technology (IT) company. The
Company's major operations include a Global Technology Services (GTS) segment, a Global Business Services (GBS) segment, a Systems
and Technology segment, a Software segment and a Global Financing segment. In February 2008, the Company acquired Arsenal Digital
Solutions and Net Integration Technologies Inc. Arsenal is a privately held company based in Cary, North Carolina, with a suite of on-
demand data protection solutions. In January 2008, IBM announced that it has completed its acquisition of Cognos Incorporated. In
January 2008, IBM acquired XIV, a privately held storage technology company based in Tel Aviv, Israel. In September 2007, IBM
completed the acquisition of DataMirror Corporation. In August 2007, IBM acquired WebDialogs, Inc. In April 2008, the Company
completed the acquisition of Telelogic AB, Diligent Technologies, FilesX and InfoDyne Corporation. </Text>
...
</TextInfo>
<Advisors>
<Auditor Code="PWCL" Name="PricewaterhouseCoopers LLP" />
<TransferAgent Code="137" Name="Computershare Trust Company" />
</Advisors>
<OfficersInfo>
<Officer ID="28503" Status="Both" Rank="1" PersonID="28503" lang="en-US">
<Submission Type="DEF 14A" Year="2008" Month="03" Day="10" />
<NameAndTitle>
<PersonalInfo>
...
</PersonalInfo>
<TenureDates>
<OfficerStart Year="1997" />
<DirectorStart Year="2000" Month="07" Day="25" />
</TenureDates>
<Titles>
<Designation>
<Start Year="2003" Month="01" Day="01" />
<LongTitle>Chairman of the Board, President, Chief Executive Officer</LongTitle>
<Title Order="0" ID="CHM">Chairman</Title>
<Title Order="1" ID="DRC">Director</Title>
<Title Order="2" ID="PRE">President</Title>
<Title Order="3" ID="CEO">Chief Executive Officer</Title>
</Designation>
...
<Designation>
...
</Designation>
</Titles>
</NameAndTitle>
</Officer>
...
</OfficersInfo>
</GeneralInformation>
</GetGeneralInformation_Response_1>
</Body>
</Envelope>

```

22.18.2.1 GeneralInformation Element

GeneralInformation is the main element that contains all the information listed above as well as:

- **RepNo** - RepNo is the permanent identifier for a company in the Thomson Reuters Fundamentals database.
- **CompanyName** - states the full name of the company.
- **Production Date** - this section contains the date and time for when the information was last generated.

XML Sample - General Information Element

```

<GeneralInformation Major="3" Minor="0" Revision="1" xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/
GeneralInformation_1">
  <RepNo>4741N</RepNo>

```



```
<CompanyName Type="Primary">International Business Machines Corp.</CompanyName>
<Production Date="2008-05-19T10:45:48" />
```

22.18.2.2 Industry Classification

Information is provided on the Thomson Reuters Industry, Thomson Reuters Sector, NAICS and SIC codes that are applicable to the company. Thomson Reuters has created industry and sector classification schemas which currently include 112 industries and 12 sectors. Each company in the database is assigned a Thomson Reuters industry and sector code.

Each company is also assigned a number of NAICS 1997 and SIC codes, depending on the lines of businesses the company is involved in. Some of these codes are company reported (reported code = 1) while others are assigned by Thomson Reuters.

Note: Company reported SIC and NAICS codes will always be tagged Order = 0 (concurrently with reported code = 1). Thomson Reuters assigned codes will be tagged with Order codes 1-10. Since the Thomson Reuters assigned codes will often include the company reported code, there will often be duplication in the list of Order codes 0-10. Users should note this potential duplication when using these codes.

Industry Codes

Taxonomy	Description
NAICS1997	Based on NAICS codes published in 1997.
SIC1987	Based on SIC codes published in 1987. Note that this is the last set of SIC codes published; SIC codes were subsequently replaced by NAICS codes.
RBSS2004	Thomson Reuters Business Sector Schema - Thomson Reuters proprietary industry codes. A four tier industry classification system.
MGSECTOR	Legacy sector codes; to be retired from Thomson Reuters products in 2006.
MGINDUSTRY	Legacy industry codes; to be retired from Thomson Reuters products in 2006.

XML Sample - Industry Classification Element

```
<IndustryClassification>
  <Taxonomy Type="RBSS2004">
    <Detail Order="1" Code="57211" Description="IT Services & Consulting" />
  </Taxonomy>
  <Taxonomy Type="NAICS1997">
    <Detail Order="1" Code="541611" Description="Administrative Management and General Management Consulting Services" />
    <Detail Order="2" Code="561439" Description="Other Business Service Centers (including Copy Shops)" />
    ...
    <Detail Order="9" Code="42142" Description="Office Equipment Wholesalers" />
    <Detail Order="10" Code="334119" Description="Other Computer Peripheral Equipment Manufacturing" />
  </Taxonomy>
  <Taxonomy Type="SIC1987">
    <Detail Order="1" Code="8742" Description="Management Consulting Services" />
    <Detail Order="2" Code="7389" Description="Business Services, Nec" />
    ...
    <Detail Order="10" Code="3577" Description="Computer Periph'L Equipment, Nec" />
  </Taxonomy>
  <Taxonomy Type="MGSECTOR">
    <Detail Order="1" Code="09" Mnemonic="SERVIC" Description="Services" />
  </Taxonomy>
  <Taxonomy Type="MGINDUSTRY">
    <Detail Order="1" Code="0909" Mnemonic="SVSBUS" Description="Business Services" />
  </Taxonomy>
</IndustryClassification>
```

Element	Description
Taxonomy Type	Schema being used.
Order	Order number for the given industry type.
Code	Code number for the given industry type.



Mnemonic	Market Guide Mnemonic (used only for MGSector and MGIndustry).
Description	Description of assigned code.

22.18.2.3 Company General Information

The Company General Information section contains some frequently used company level information such as number of employees, shares outstanding and float. Where available (for US companies only), information is provided about when the company went public, and where the company is incorporated in.

Note: The shares outstanding and float numbers are derived from the issue level shares outstanding and float figures. Share counts from all issues are added up, weighted by the conversion factor to the primary class of shares, and expressed in equivalent to primary class basis.

XML Sample - Company General Information Element
<pre> <CompanyGeneralInfo> <Employees LastUpdated="2007-12-31">386558</Employees> <TotalSharesOut Date="2008-03-31" TotalFloat="1365000000.0">1373478587.0</TotalSharesOut> <IncorporatedIn Date="1911-06-16" Country="USA">NY</IncorporatedIn> </CompanyGeneralInfo> </pre>

Employees: Number of employees.

- **LastUpdated:** Date this value was last updated.

TotalSharesOut: Shares outstanding, in equivalent to primary class basis.

- **Date:** Date this value was last updated.
- **TotalFloat:** Float, derived from issue level data.

CommonShareholders: Number of common shareholders.

- **Date:** Date this value was last updated.

IncorporatedIn: State of incorporation (US only).

- **Date:** Date of incorporation.

PublicSince: Date company went public.

22.18.2.4 Issue Information

The issue information section provides certain details about each equity issue that the company has authorized. Please see section Issues, Issue, and IssueID - Response Elements for explanations of Issue ID and Issue Order. The Issue Type denotes whether an Issue is Common (C) or Preferred (P). Issue Details contain the Par Currency, Par Value, Shares Authorized and other values.

XML Sample - Issue Information Element
<pre> <IssueInformation> <Issue ID="1" Type="C" Order="1"> <IssueDetails ParCurrency="USD" ParValue="0.2" ShsAuthorized="4.6875E+09" ShsOut="1.37347853E+09" ShsOutDate="2008-03-31" Float="1.365E+09" Votes="1" ConversionFactor="1" /> </Issue> <Issue ID="2" Type="P" Order="1"> <IssueDetails ParCurrency="USD" ParValue="0.01" ShsAuthorized="1.5E+08" ShsOut="0" ShsOutDate="2008-03-31" /> </Issue> </IssueInformation> </pre>

Element	Description
Issue ID	Unique, Thomson Reuters assigned issue ID within a company. Please see details in section Issues, Issue, and IssueID - Response Elements.
Issue Type	Common or Preferred Issue.
Issue Order	Thomson Reuters assigned Order ID. Please see details in section Issues, Issue, and IssueID - Response



	Elements. Order = 1 denotes primary issue.
ParCurrency	The currency of the Par value.
ParValue	Par value.
ShsAuthorized	Number of shares authorized for the issue.
ShsOut	Number of shares outstanding for the issue.
Float	Float.
Votes	Vote per share for this issue.
ConversionFactor	Conversion factor to primary issue.

22.18.2.5 Contact Information

This section provides contact information for the company, including an address, a contact person with title, phone/fax number(s) and e-mail.

XML Sample - Contact Information Element

```
<ContactInfo LastUpdated="2008-04-29T17:13:54">
  <Address>
    <StreetAddress Line="1">One New Orchard Road</StreetAddress>
    <City>Armonk</City>
    <StateOrRegion>NY</StateOrRegion>
    <PostalCode>10504</PostalCode>
    <Country Code="USA">United States</Country>
  </Address>
  <ContactPerson>
    <ContactName>Edward Barbini</ContactName>
    <ContactTitle>Investor Relations</ContactTitle>
  </ContactPerson>
  <PhoneNumbers>
    <Phone Type="MainPhone">
      <CountryPhoneCode>1</CountryPhoneCode>
      <CityAreaCode>914</CityAreaCode>
      <Number>4991900</Number>
    </Phone>
    <Phone Type="MainFax">
      <CountryPhoneCode>1</CountryPhoneCode>
      <CityAreaCode>914</CityAreaCode>
      <Number>7656021</Number>
    </Phone>
    <Phone Type="ContactPhone">
      <CountryPhoneCode>1</CountryPhoneCode>
      <CityAreaCode>914</CityAreaCode>
      <Number>4996565</Number>
    </Phone>
  </PhoneNumbers>
</ContactInfo>
```

22.18.2.6 Web Links

This section lists various commonly used web page addresses for the company, including home page, 'news releases' page, 'profile' page, the investor relations page, etc.

XML Sample - Web Links Element

```
<WebLinksInfo LastUpdated="2008-02-27T09:14:48">
  <WebSite Type="Home Page">http://www.ibm.com/</WebSite>
  <WebSite Type="Investor Relations">http://www.ibm.com/investor/?cm_re=rcol-_link-_investor</WebSite>
  <WebSite Type="Financial Information">http://www.ibm.com/investor/filings/index.phtml</WebSite>
  <WebSite Type="Corporate History/Profile">http://www.ibm.com/investor/company/index.phtml</WebSite>
  <WebSite Type="Executives">http://www.ibm.com/investor/corpgovernance/cgmgmt.phtml</WebSite>
  <WebSite Type="Products/Services">http://www.ibm.com/sandbox/homepage/version-b/</WebSite>
</WebLinksInfo>
```



```
<WebSite Type="Employment Opportunities">http://www-03.ibm.com/employment/</WebSite>
</WebLinksInfo>
```

22.18.2.7 Descriptive Sections

TextInfo segment provides various descriptive information sets on the company, including the following:

- **Business Summary:** Short business description, limited to 1,000 characters.
- **Equity Composition:** For US exchange traded co's, par values of common issues, treasury stock info and beneficial ownership info if available.
- **Analyst Footnotes:** Comments from Thomson Reuters analyst responsible for updating company.
- **Financial Summary:** Summary of most recently reported results.

Note: Thomson Reuters also has a separate XML product that provides Long Business Descriptions (approx. 8,000 characters) for US exchange traded companies.

XML Sample - Text Information Element

```
<TextInfo>
  <Text Type="Business Summary" LastUpdated="2008-04-29T21:08:17" lang="en-US" SourceFilingDate="2008-01-02T00:00:00"
  SourceFilingType="PRS; PRS; PRS">International Business Machines Corporation (IBM) is an information technology (IT) company. The
  Company's major operations include a Global Technology Services (GTS) segment, a Global Business Services (GBS) segment, a Systems
  and Technology segment, a Software segment and a Global Financing segment. In February 2008, the Company acquired Arsenal Digital
  Solutions and Net Integration Technologies Inc. Arsenal is a privately held company based in Cary, North Carolina, with a suite of on-
  demand data protection solutions. In January 2008, IBM announced that it has completed its acquisition of Cognos Incorporated. In
  January 2008, IBM acquired XIV, a privately held storage technology company based in Tel Aviv, Israel. In September 2007, IBM
  completed the acquisition of DataMirror Corporation. In August 2007, IBM acquired WebDialogs, Inc. In April 2008, the Company
  completed the acquisition of Telelogic AB, Diligent Technologies, FilesX and InfoDyne Corporation. </Text>
  <Text Type="Equity Composition" LastUpdated="2008-04-30T00:00:00">Common Stock $.20 Par, 3/08, 4,687,500,000 auth.,
  2,069,370,899 issd., less 695,892,312 shs. in Treas. @ $.33B. Insiders own less than 1% (incl. 5.3M Options). PO 12/68, 50K shs. @
  $328.50 by Merrill Lynch. 5/99, 5/97, 2-for-1 stock splits. FY'04 Q's are restated.</Text>
  <Text Type="Analyst Footnotes" LastUpdated="2008-04-30T00:00:00">7/95, Co. acq. Lotus Development Corp. for $3.2B. FY'98-'00
  financials and '99-'00 Q's are reclass. FY'01-'02 Q's are restated for discontinued operations.</Text>
  <Text Type="Financial Summary" LastUpdated="2008-04-30T00:00:00">BRIEF: For the three months ended 31 March 2008,
  International Business Machines Corporation's revenues increased 11% to $24.5B. Net income from continuing operations increased 26%
  to $2.32B. Revenues reflect an increase in income from Global Technology Services segment, higher sales from Software segment and
  Global Business services segment. Net income also reflects higher gross margin and increased intellectual property income.</Text>
</TextInfo>
```

Element	Description
Type	Type of descriptive information.
LastUpdated	Last update date and time for the textual data.
LanguageCode	Language in which text is presented. Applicable only to Business summary. Currently the only available language in v3 files is English (en).
SourceFilingDate	Filing date of source document.
SourceFilingType	Type of source document, such as 10-K.

22.18.2.8 Advisors

This section provides information on the company's current auditor and transfer agent/registrar where available. Where available, phone numbers for transfer agents are also provided. The phone number format is similar to phone number in the ContactInfo section of this file.

XML Sample - Advisors Element

```
<Advisors>
  <Auditor Code="PWCL" Name="PricewaterhouseCoopers LLP" />
  <TransferAgent Code="137" Name="Computershare Trust Company" />
</Advisors>
```



Element	Description
Auditor Code	4-letter code for auditor.
Auditor Name	Full name of auditing firm.
TransferAgent Code	Numeric code for transfer agent.
TransferAgent Name	Current company transfer agent/registrar.
Phone	Contains the following advisor information: • CountryPhoneCode: Country codes of phone numbers. • City-areacode: City area codes of phone numbers. • Number: Phone numbers.

22.18.2.9 Officers

This section provides information on company executives, including name, age, title(s) and source document where officer information was collected from. Codes are used to represent officer titles and source document types.

While Thomson Reuters collects information on all officers and directors listed in company filings, the GenInfo file contains information about up to 10 officers and 5 directors.

Person Identifiers

Each person within each company is assigned a unique Officer ID. This ID does not change, and is not re-used. However, no relationship is indicated between persons that belong to more than one company. While an Officer ID indicates a unique person within a company, the same person will be assigned a different OfficerID in the context of a different company. Thus, if John Lennon is currently an officer of one company and director of two companies, and in addition is an ex-officer of a fourth company, he will appear with four ID's in the file, with no link indicated between the four people.

A person can be an officer, a director or both an officer and a director within a firm. While no ranking is provided by reporting companies, Thomson Reuters will assign a rank to each person based on their title(s), with the highest ranking person having the lowest rank number.

Officer specific data

Within the Personal Info section, the First, Middle and Last name, and person's age is provided.

Tenure dates indicate the length of service for this person with this company. Tenure may be indicated for Officer, Director or both. The existence of an End Date indicates that the person is no longer an Officer (or Director) with the company.

Note: The date is not given in regular Date format (YYYYMMDD) because some components of the date (e.g. the Day) may not be available.

In some instances the Start Year may also not be available to Thomson Reuters. In such instances Start Year is populated with the string NA.

The Titles section details the various titles a person has held with a company, over time. Each Designation has a Start date, may have an End date, has a Long Title as reported by the company, and up to four titles.

Thus, a company may report a person's most recent title as 'Chairman of the Board and Chief Executive Officer'. This will appear as the Long Title. The person will also be tagged with two 'title ID's': CHM = Chairman and CEO = Chief Executive Officer. If available, this title will also have a Start date. However, as the most current title, this will not have an End date.

If this person was previously a VP of the company, then there will be another Designation record in the file. This could have a Long Title of Vice President and a title ID VP=Vice President. As this is not the most current title, this designation will have an End date.

XML Sample - Officers Element

```
<OfficersInfo>
  <Officer ID="28503" Status="Both" Rank="1" PersonID="28503" lang="en-US">
```



```

<Submission Type="DEF 14A" Year="2008" Month="03" Day="10" />
<NameAndTitle>
  <PersonalInfo>
    <Info Type="LastName">Palmisano</Info>
    <Info Type="FirstName">Samuel</Info>
    <Info Type="Suffix" />
    <Info Type="Prefix" />
    <Info Type="PreferredName" />
    <Info Type="Middle/Initial">J.</Info>
    <Info Type="Age">56</Info>
    <Info Type="Sex">M</Info>
  </PersonalInfo>
  <TenureDates>
    <OfficerStart Year="1997" />
    <DirectorStart Year="2000" Month="07" Day="25" />
  </TenureDates>
  <Titles>
    <Designation>
      <Start Year="2003" Month="01" Day="01" />
      <LongTitle>Chairman of the Board, President, Chief Executive Officer</LongTitle>
      <Title Order="0" ID="CHM">Chairman</Title>
      <Title Order="1" ID="DRC">Director</Title>
      <Title Order="2" ID="PRE">President</Title>
      <Title Order="3" ID="CEO">Chief Executive Officer</Title>
    </Designation>
    ...
    <Designation>
      <Start Year="1997" />
      <End Year="2000" Month="07" Day="25" />
      <LongTitle>Senior Vice President and Group Executive</LongTitle>
      <Title Order="0" ID="SVP">Senior Vice President</Title>
    </Designation>
  </Titles>
</NameAndTitle>
</Officer>
...
<Officer ID="381182" Status="Director" Rank="22" PersonID="923422" lang="en-US">
...
</Officer>
</OfficersInfo>

```

Element	Description
Officer ID	ID number for the officer.
Officer Status	Denotes whether individual is an officer of company, director or both.
Officer Rank	Rank order of the officer.
Officer PersonID	ID number for person.
PersonalInfo	Last name, first name, middle initial, age or sex of officer.
TenureDates	Contains start dates as a director or/and as an Officer.
Titles	Contains designations for the title , start date under the title, title order and abbreviation.

22.19 Get Industry Aggregate (GetIndustryAggregate_1)

You can use GetIndustryAggregate_1 request to generate ratios and statistics for an industry, sector, or index. This data includes the following groups:

- Price and Volume
- Dividend
- Growth Rates
- Income Statement
- Management Effectiveness
- Per Share Ratios
- Prices Related
- Institutional Ownership
- Financial Strength



- Efficiency Ratios
- Profitability Ratios
- Share Related Items

XML Sample Request - Getting Industry Aggregates

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Fundamentals/Fundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1/GetIndustryAggregate_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetIndustryAggregate_Request_1 xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1"
      companyIdType="REPONO" companyId="[agg repono]" countryCode="" />
  </Body>
</Envelope>
```

Note: countryCode only applies if a TICKER was chosen for companyIdType and the TICKER entered does not specify the location of the company.

For retrieving ratios for an aggregate, the "REPONO" companyIdType should always be used.

Specify the repono for a single industry, sector, or index.

Note: You can get a list of aggregate reponos by using GetFundamentalsReferenceLists_1 request (see section Getting a List of Industries, Sectors, and Indexes (Aggregates)).

For example, GetIndustryAggregate_1 request for industry "A5C6B" returns the following:

XML Sample Response - Getting Industry Aggregates

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1/GetIndustryAggregates_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-14T12:56:25.3036846Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetIndustryAggregate_Response_1 xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1">
      <MGIA Major="1" Minor="0" Revision="1" xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/IndustryAggregate_1">
        <AggIDs Category="Index">
          <AggID Type="REPO">A5C6B</AggID>
          <AggID Type="CODE">SP600</AggID>
          <AggID Type="NAME">S&P 600</AggID>
        </AggIDs>
        <Aggregates>
          <Group ID="Price & Volume">
            <Agg FieldName="BETA" Type="N">1.01100</Agg>
            <Agg FieldName="NPRICE" Type="N">21.47000</Agg>
            <Agg FieldName="PR04WKPCT" Type="N">-100.00000</Agg>
            ...
            <Agg FieldName="PR5DAYPRC" Type="N">-100.00000</Agg>
            <Agg FieldName="PRYTDPCCT" Type="N">-100.00000</Agg>
            <Agg FieldName="VOL1DPRC" Type="N">19.98800</Agg>
          </Group>
          <Group ID="Dividend">
            <Agg FieldName="YIELD" Type="N">3.98600</Agg>
          </Group>
        </Aggregates>
      </MGIA>
    </GetIndustryAggregate_Response_1>
  </s:Body>
</s:Envelope>
```



```

    <Agg FieldName="ADIV5YAVG" Type="N">1.26200</Agg>
  </Group>
  ...
  <Group ID="Share Related Items">
    <Agg FieldName="MKTCAP" Type="N">481.62800</Agg>
  </Group>
</Aggregates>
</MGIA>
</GetIndustryAggregate_Response_1>
</Body>
</Envelope>

```

Attribute	Category Value
REPO	Thomson Reuters repo (report) number for the industry.
CODE	Thomson Reuters code for the industry.
NAME	Descriptive name for the industry.
GROUP ID	The ratios and statistics are broken into related groups. These groups are "Price & Volume", "Dividend", "Growth Rates", "Income Statement", "Management Effectiveness", "Per Share Ratios", "Price Related", "Institutional Ownership", "Financial Strength", "Efficiency Ratios", "Profitability Ratios", and "Share Related Items".
FieldName	Each item is identified by a field name.
Type	The <Type> attribute indicates the data type: <N> = number, <D> = date, or <C> = character.

22.20 Getting Company Reference Information

Company Reference information provides the following company information:

- **Company Information:** This section contains information relevant to the Company. It contains information about external Company ID's (e.g. IRS Number, Company Name etc), about what content sets (e.g. financial statements, estimates, officer data etc) are available from Thomson Reuters, how recently such information has been updated, and other relevant details.
- **Issue Information:** IssueInformation contains details specific to the various equity issues that belong to a company (e.g. Common Issue 1, Preferred issue 4 etc). Information includes external ID's (CUSIP, SEDOL Ticker, primary RIC etc), about whether the issue is public or private etc.

22.20.1 Get Fundamentals Reference Info (GetFundamentalsReferenceInfo_1)

By specifying 'companyID', 'companyIDType' and an optional 'countryCode' we are able to retrieve that company's reference information.

The following example passes RIC for IBM.

XML Sample Request - Getting Fundamentals Reference Information
<pre> <Envelope xmlns="http://www.w3.org/2003/05/soap-envelope"> <Header> <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Fundamentals/Fundamentals.svc</To> <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID> <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1/GetFundamentalsReferenceInfo_1</Action> <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1"> <ApplicationID>[AppID]</ApplicationID> <Token>[service token]</Token> </Authorization> </Header> <Body> <GetFundamentalsReferenceInfo_Request_1 xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1" companyID="IBM.N" companyIDType="RIC" countryCode="" /> </Body> </Envelope> </pre>



Note: countryCode only applies if a TICKER was chosen for companyIDtype and the TICKER entered does not specify the location of the company.

The response retrieves the following information:

XML Sample Response - Getting Fundamentals Reference Information

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1/
    GetFundamentalsReferenceInfo_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-14T12:56:25.3036846Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetFundamentalsReferenceInfo_Response_1 xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1">
      <ReferenceInformation Major="3" Minor="0" Revision="1" xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/
      ReferenceInformation_1">
        <RepNo>4741N</RepNo>
        <Production Date="2008-01-26T21:59:55"></Production>
        <CompanyInformation>
          <CompanyXrefs>
            <CompanyXref Type="IRSN">130871985</CompanyXref>
            <CompanyXref Type="CIKNo">0000051143</CompanyXref>
            <CompanyXref Type="FProXref">100002523</CompanyXref>
            <CompanyXref Type="OrgID">18228</CompanyXref>
            <CompanyName Type="Primary">International Business Machines Corp.</CompanyName>
          </CompanyXrefs>
          <CompanyStatus>
            <Company Type="EQU"></Company>
            <AvailableInfo Type="BusinessIntelligence">1</AvailableInfo>
            <AvailableInfo Type="Financials">1</AvailableInfo>
            <AvailableInfo Type="Estimates">1</AvailableInfo>
            <AvailableInfo Type="SignificantDevelopment">1</AvailableInfo>
            <AvailableInfo Type="Officers">1</AvailableInfo>
            <FilingStatus CurrentStatus="Filing" ReasonCode="0"></FilingStatus>
            <HasPublicDebt>0</HasPublicDebt>
          </CompanyStatus>
          <CompanyUpdates>
            <LastModified Type="Financials">2008-01-24T18:44:27</LastModified>
            <LastModified Type="Other">2008-01-25T10:22:02</LastModified>
            <LatestInformation Type="AnnualFinancials">2007-12-31</LatestInformation>
            <LatestInformation Type="InterimFinancials">2007-12-31</LatestInformation>
          </CompanyUpdates>
          <Currencies>
            <Currency Type="FinancialStatements">USD</Currency>
            <Currency Type="Estimates">USD</Currency>
            <Currency Type="PrimaryIssuePrice">USD</Currency>
          </Currencies>
          <IndustryClassification>
            <Taxonomy Type="RBSS2004">
              <Detail Order="1" Code="57211" Description="IT Services & Consulting"></Detail>
            </Taxonomy>
            ...
            <Taxonomy Type="MGINDUSTRY">
              <Detail Order="1" Code="0909" Description="Business Services" Mnemonic="SVSBUS"></Detail>
            </Taxonomy>
          </IndustryClassification>
        </CompanyInformation>
        <IssueInformation>
          <Issue ID="1" Type="C" Order="1">
            <IssueXrefs>
              <IssueXref Type="Name">Common Stock</IssueXref>
              <IssueXref Type="Ticker">IBM</IssueXref>
              <IssueXref Type="RIC">IBM</IssueXref>
              <IssueXref Type="DisplayRIC">IBM.N</IssueXref>
            </IssueXrefs>
            <IssueStatus>
              <IssueType>Common Stock</IssueType>
            </IssueStatus>
          </IssueInformation>
        </s:Body>
      </s:Envelope>
```



```

</IssueStatus>
<IssueSpecifics>
  <Exchange Code="NYSE" Country="USA" Region="NA">New York Stock Exchange</Exchange>
  <ListingType>OSR</ListingType>
  <MostRecentSplit Date="1999-05-27">2.0</MostRecentSplit>
  <SplitHistory>
    <Split Date="1999-05-27">2.0</Split>
    <Split Date="1997-05-28">2.0</Split>
  </SplitHistory>
</IssueSpecifics>
</Issue>
<Issue ID="2" Type="P" Order="1">
  <IssueXrefs>
    <IssueXref Type="Name">Preferred Stock- 7.5%</IssueXref>
  </IssueXrefs>
  <IssueStatus>
    <IssueType>Preferred Stock</IssueType>
  </IssueStatus>
  <IssueSpecifics>
    <Exchange Code="NYSE" Country="USA" Region="NA">New York Stock Exchange</Exchange>
  </IssueSpecifics>
</Issue>
</IssueInformation>
</ReferenceInformation>
</GetFundamentalsReferenceInfo_Response_1>
</Body>
</Envelope>

```

22.20.2 ReferenceInformation Element

ReferenceInformation is the main element that contains the CompanyInformation Element and Issue element as well as:

- **RepNo:** Permanent identifier for a company assigned by Thomson Reuters.
- **Production Date:** This section contains the date and time for when the information was last generated.

XML Sample - ReferenceInformation Element

```

<ReferenceInformation Major="3" Minor="0" Revision="1" xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/
ReferenceInformation_1">
  <RepNo>4741N</RepNo>
  <Production Date="2008-01-26T21:59:55"></Production>
  <CompanyInformation>
    ...
  </CompanyInformation>
  <IssueInformation>
    ...
  </IssueInformation>
</ReferenceInformation>

```

22.20.3 Company Xref's

This section contains company level reference information including company name and external company identifiers.

Available external identifiers at a company level are the IRS Number, CIK number and XRef; both are specific to US companies. In addition, the Company Name is provided.

Note: Currently, only one version of Company Name (labeled 'Primary') is provided in the file. In the future, other versions, such as a local version or a more abbreviated version of the name may be provided.

XML Sample - ReferenceInformation Element

```

<CompanyXrefs>
  <CompanyXref Type="IRSNo">130871985</CompanyXref>

```



```

<CompanyXref Type="CIKNo">0000051143</CompanyXref>
<CompanyXref Type="FProXref">100002523</CompanyXref>
<CompanyXref Type="OrgID">18228</CompanyXref>
<CompanyName Type="Primary">International Business Machines Corp.</CompanyName>
</CompanyXrefs>

```

22.20.4 Company Status

CompanyStatus contains information about the type of content available for the company, and the company classification according to Thomson Reuters. The following is the breakdown of information provided in CompanyStatus:

Element	Description
Company Type	This indicates the type of capital structure a company has or the type of issues the company primarily trades. Note: The Thomson Reuters fundamental database primarily covers financial statement information for companies with publicly traded equity. The majority of companies trade Equity and a minority trade Debt Issues only, with the other types appearing infrequently. If a company trades more than one type of the stock, only the primary stock will be used to describe the company type. The following is the list of values and their descriptions: • EQU: Stands for Equity. Company trades common shares. Additionally, the company may have other types of securities such as debt and preferred stock issued. • DBT: Stands for Debt Issue. Company has publicly traded debt but no common or preferred stock trading. • PRE: Stands for Preferred. Issue Company has preferred stock but no common stock trading. • IPO: Stands for Pre-IPO. Company has filed an IPO registration statement, but shares are not trading in the market. • LPT Limited: Stands for Partnership, Reserved for future use. • IDX: Stands for Index. Reserved for future use. • PVT: Stands for Private. Company is private.
Company Status Type	Contains the following status information: • ActiveStatus: This flag indicates whether a company is active in the Thomson Reuters fundamental database. The flag can take one of two values: ~ 0 means the company is inactive due to all of its issues being inactive. ~ 1 means the company is active due to at least one issue being considered active. • CurrentEstimates: This flag indicates whether there are any 'current' or 'valid' estimates for the company. ~ 0 stands for no current estimates. No brokers have any estimates that are considered current or active. The company may have had active estimates in the past. ~ 1 stands for current estimates exist. At least one broker has one estimate that is currently considered 'active'. • AvailableInfo: Indicated what type of company information is available from Thomson Reuters Company Content. The types of content referred to here are: ~ Financials: History of company financials. ~ Estimates: Estimates from brokers, plus Thomson Reuters Consensus Estimates. ~ Significant Developments: filtering service. See chapter Significant Developments for more information. ~ BusinessIntelligence: Descriptive information, including company address, business description etc. ~ Officers: Names, titles, bios and compensation on company officers and directors.
FilingStatus	Indicates whether or not the company is currently filing financial statements. There are instances when the company is active and public, but not filing financials statements. This flag will indicate when an active, public company is not filing, and why it is not filing.
HasPublicDebt	Indicates whether or not the company has any outstanding public debt.

XML Sample - Company Status Element

```

<CompanyStatus>
  <Company Type="EQU"></Company>

```



```

<AvailableInfo Type="BusinessIntelligence">1</AvailableInfo>
<AvailableInfo Type="Financials">1</AvailableInfo>
<AvailableInfo Type="Estimates">1</AvailableInfo>
<AvailableInfo Type="SignificantDevelopment">1</AvailableInfo>
<AvailableInfo Type="Officers">1</AvailableInfo>
<FilingStatus CurrentStatus="Filing" ReasonCode="0"></FilingStatus>
<HasPublicDebt>0</HasPublicDebt>
</CompanyStatus>

```

22.20.5 Company Updates

This section contains information about when certain types of content were last updated as well as data regarding the most current fiscal period for which financial data. The LatestInformation element contains the period end dates for the latest available financials.

XML Sample - Company Updates Element

```

<CompanyUpdates>
  <LastModified Type="Financials">2008-01-24T18:44:27</LastModified>
  <LastModified Type="Other">2008-01-25T10:22:02</LastModified>
  <LatestInformation Type="AnnualFinancials">2007-12-31</LatestInformation>
  <LatestInformation Type="InterimFinancials">2007-12-31</LatestInformation>
</CompanyUpdates>

```

22.20.6 Currencies

This section contains information about the various currencies that may be applicable to a specific company. This includes the following:

- **FinancialStatements:** Currency of the most current financial statements.
- **Estimates:** The currency of the estimates for this company.
- **PrimaryIssuePrice:** The pricing currency for the 'primary issue' for the company.

XML Sample - Currencies Element

```

<Currencies>
  <Currency Type="FinancialStatements">USD</Currency>
  <Currency Type="Estimates">USD</Currency>
  <Currency Type="PrimaryIssuePrice">USD</Currency>
</Currencies>

```

22.20.7 Industry Classification

This section contains information about the company's primary industry classifications. While Thomson Reuters Fundamentals tags each company by up to 10 NAICS and 10 SIC codes, GetFundamentalsReferenceInfo only contains the primary classification for each industry classification system (taxonomy).

XML Sample - Industry Classification Element

```

<IndustryClassification>
  <Taxonomy Type="RBSS2004">
    <Detail Order="1" Code="57211" Description="IT Services & Consulting"></Detail>
  </Taxonomy>
  <Taxonomy Type="NAICS1997">
    <Detail Order="1" Code="541611" Description="Administrative Management and General Management Consulting Services"></Detail>
  </Taxonomy>
</IndustryClassification>

```




```

<Taxonomy Type="SIC1987">
  <Detail Order="1" Code="8742" Description="Management Consulting Services"></Detail>
</Taxonomy>
<Taxonomy Type="MGSECTOR">
  <Detail Order="1" Code="09" Description="Services" Mnemonic="SERVIC"></Detail>
</Taxonomy>
<Taxonomy Type="MGINDUSTRY">
  <Detail Order="1" Code="0909" Description="Business Services" Mnemonic="SVSBUS"></Detail>
</Taxonomy>
</IndustryClassification>

```

Element	Description
Type	Indicates type of classification.
Order	In this case the order will always be 1 indicating primary classification.
Code	Unique industry code.
Description	Name of the industry.
Mnemonic	A mnemonic for the code.

22.20.8 Issue Information

This section provides Issue level information for the company's issues. While a company may have multiple issues (e.g. multiple classes of common, preferred) outstanding, one of these is considered to be the 'Primary' Issue.

Various factors are taken into account in deciding what the primary issue is. These include whether or not the issue trades, the number of shares outstanding, float, trading volumes, voting power etc. In general, the primary issue is the company's Common issue that is most actively traded and that has the largest float.

The information in this section allows user to cross-reference the issues with some commonly used identifiers, and also get other basic information on the issue.

Thomson Reuters tracks information on both common and preferred equity types, as well as on multiple classes of each type. Each of these issues is assigned an Order number, with the primary issue receiving an Order of 1. The Order assigned to a specific issue may change over time.

Thomson Reuters also assigns an IssueID for each of an Issuer's issues. These IssueID's do not change over time, and can be used to uniquely identify an issue in combination with the Report Number (RepNo).

Note: The financial statement information is not issue specific, but is published at the company level.

XML Sample - Issue Information Element

```

<IssueInformation>
  <Issue ID="1" Type="C" Order="1">
    <IssueXrefs>
      ...
    </IssueXrefs>
    <IssueStatus>
      ...
    </IssueStatus>
    <IssueSpecifics>
      ...
    </IssueSpecifics>
  </Issue>
  <Issue ID="2" Type="P" Order="1">
    ...
  </Issue>
</IssueInformation>

```

- **ID:** Unique, non-changing ID.
- **Type:** Common (C) or Preferred (P).
- **Order:** Order of the issue. Order = 1 denotes primary issue.



22.20.9 Issue Xref

This section contains issue level reference information including company name, and external identifiers.

Current identifiers at the issue level are:

- Issue Name
- Ticker
- RIC
- Pricing RIC

Since an issue may have multiple RIC's (RIC's are per listing, and not per issue), the RIC in GetFundamentalsReferenceInfo_1 Response is the 'primary RIC'.

The Pricing RIC is a market-level code structured as a number of elements. Most ordinary equities have a three- or four-character code used to create the RIC and are followed by a delimiter and source code. Lower case characters are sometimes used to denote A/B Class Shares or Preference Shares. The Delisted RIC Syntax consists of a ^ after the original RIC followed by a month and year could that signifies when the RIC was actually de-listed. Examples include TRIN.O, MLTX^C03.

XML Sample - IssueXref Element

```
<IssueXrefs>
  <IssueXref Type="Name">Common Stock</IssueXref>
  <IssueXref Type="Ticker">IBM</IssueXref>
  <IssueXref Type="RIC">IBM</IssueXref>
  <IssueXref Type="DisplayRIC">IBM.N</IssueXref>
</IssueXrefs>
```

22.20.1 Issue Status

This section contains further information about the issue - whether the issue is active (still exists, or has been retired etc), whether the issue is public, or if it is expected to IPO. The status types are as follows:

- **ActiveStatus:** Whether issue is currently active (1 = active).
- **PublicStatus:** Whether issue is public or private (1 = public).
- **ExpectedIPO:** Whether the private issue is expected to IPO (1= expected to IPO).

XML Sample - IssueStatus Element

```
<IssueStatus>
  <IssueType>Common Stock</IssueType>
  <Status Type="ActiveStatus">1</Status>
  <Status Type="PublicStatus">1</Status>
  <Status Type="ExpectedIPO">0</Status>
</IssueStatus>
```

22.20.11 Issue Specific

This section contains details about where the exchange is listed and the type of listing this is.

Some company issues trade on multiple exchanges around the world. These cross exchange listings generally represent the same issue of stock, and therefore the same fundamental information. Thomson Reuters only tracks the listing on the primary exchange in these cases.

However, certain cross border listings such as American Depository Receipt's (ADR's) are stored as separate 'issuers' in the Thomson Reuters Fundamental database because regulatory bodies of certain markets require the disclosure of financial statements per local accounting. Each of these 'companies' has its own set of financial statements. In the Thomson Reuters database these companies will appear more than once - each 'issuer' with its own RepNo. A full list of companies that appear



more than once in the database may be provided on request.

Thomson Reuters tracks the following types of listing types:

Listing Types

Type	Description
OSR	Ordinary Shares.
ADR	American Depository Receipt.
LDR	Level I ADR.
ROF	Rule 144 shares.
EDR	European Depository Receipt.
CCR	Canadian Cross Listing.
GSR	Global Share.

If there has been a stock split since the company was first added to the Thomson Reuters database the most recent split date and split factor will be provided. For example, a split factor of 2 indicates that a 2-for-1 stock split has occurred. When the stock split becomes effective, Thomson Reuters uses the split factor to adjust all per share and shares outstanding fields in the fundamental database. As such all data is adjusted to reflect the current share capital structure. If there have been no stock splits since the company was added to the database, the element will not be published.

XML Sample - IssueSpecific Element

```
<IssueSpecifics>
  <Exchange Code="NYSE" Country="USA" Region="NA">New York Stock Exchange</Exchange>
  <ListingType>OSR</ListingType>
  <MostRecentSplit Date="1999-05-27">2.0</MostRecentSplit>
  <SplitHistory>
    <Split Date="1999-05-27">2.0</Split>
    <Split Date="1997-05-28">2.0</Split>
  </SplitHistory>
</IssueSpecifics>
```

- **Exchange:** Contains Exchange Code, three-letter country code and name of the exchange.
- **Listing Type:** Contains one of listing type values described above.
- **MostRecentSplit:** Contains the split factor and a date of the most recent split.

22.21 Getting a List of Industries, Sectors, and Indexes (Aggregates)

To request ratios for specific industries, sectors, or indexes (aggregates) you must first retrieve the Thomson Reuters code for the aggregate. Use `GetFundamentalsReferenceList_1` request to generate a list of aggregates and their associated codes. For information about requesting the ratios for the aggregate, see section `Get Industry Aggregate`.

Note: The data in this list rarely changes. Thomson Reuters recommends only requesting the aggregate list once a day and caching the data.

XML Sample Request - Getting a List of Aggregates

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/2009/01/26/Fundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1/GetFundamentalsReferenceLists_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetFundamentalsReferenceLists_Request_1 xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1">
```

```

    Category="Aggregate" />
  </Body>
</Envelope>

```

The response returns the following when querying for Aggregates:

XML Sample Response - Getting a List of Aggregates

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1/
    GetFundamentalsReferenceLists_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-14T12:56:25.3036846Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetFundamentalsReferenceLists_Response_1 xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1">
      <FundamentalLookup xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/LookUp_1">
        <Aggregates>
          <Aggregate RepoNo="A5BF7" Category="MGSector" AggCode="01" AggMnem="BASICM" AggName="Basic Materials"
          ParentICCode=""></Aggregate>
          <Aggregate RepoNo="A5BF8" Category="MGIndustry" AggCode="0103" AggMnem="CHMMFG" AggName="Chemical
          Manufacturing" ParentICCode="01"></Aggregate>
          ...
          <Aggregate RepoNo="A6A48" Category="Index" AggCode="SP500" AggMnem="" AggName="S&P 500" ParentICCode=""></
          Aggregate>
          <Aggregate RepoNo="A5C6B" Category="Index" AggCode="SP600" AggMnem="" AggName="S&P 600" ParentICCode=""></
          Aggregate>
        </Aggregates>
      </FundamentalLookup>
    </GetFundamentalsReferenceLists_Response_1>
  </s:Body>
</Envelope>

```

Attribute	Description
AggCode	Thomson Reuters code for the industry, sector or index.
AggMnem	Mnemonic code for the industry, sector or index.
Category	Aggregate type. "MGSector" = Sector, "MGIndustry" = Industry, "Index" = Index.
ParentICCode	Indicates the parent sector code for an industry.
RepoNo	Thomson Reuters repo (report) number for the industry, sector, or index.

22.21.1 Get Fundamentals Reference Lists (GetFundamentalsReferenceLists_1)

In addition to retrieving a list of Aggregates showed in the previous example GetFundamentalsReferenceLists_1 request method can be used to retrieve other reference lists by setting the value of the Category attribute to one of the following:

Fundamental Reference Category List

Name	Category Value
Accounting Standards	AccountingStandards
Aggregates	Aggregate
Auditors	Auditor
Auditors Opinions	AuditorsOpinions
Balance Sheet	BalanceSheetTypes



Types	
Cash Flow Methods	CashFlowMethods
COA Types	COATypes
Colleges	Colleges
Co-Statuses	CoStatuses
Countries	Countries
Currencies	Currencies
Date Units	DateUnits
Degrees	Degrees
Exchanges	Exchanges
Financial Statements	FinancialStatements
Issue Types	IssueTypes
Issuer Types	IssuerTypes
Line Items	LineItems
Report Units	ReportUnits
Titles	Titles
Topic Type	TopicType
Taxonomy	TaxonomyCodes
Update Types	UpdateTypes

XML Sample Request - Getting Fundamentals Reference List

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Fundamentals/Fundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1/GetFundamentalsReferenceLists_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetFundamentalsReferenceLists_Request_1 xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1"
      Category="CashFlowMethods" />
  </Body>
</Envelope>
```

The response returns the following when querying for CashFlowMethods:

XML Sample Response - Getting Fundamentals Reference List

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1/GetFundamentalsReferenceLists_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-14T12:56:25.3036846Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetFundamentalsReferenceLists_Response_1 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1">
      <FundamentalLookUp xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/LookUp_1">
```



```

    <CashFlowMethods>
      <CashFlowMethod Code="DIR">Direct</CashFlowMethod>
      <CashFlowMethod Code="IND">Indirect</CashFlowMethod>
    </CashFlowMethods>
  </FundamentalLookup>
</GetFundamentalsReferenceLists_Response_1>

</Body>
</Envelope>

```

Response Format - the FundamentalLookup element will contain the sub-element requested for in the Category attribute that will in turn contain a node for each reference value. In the example above since the list for CashFlowMethods was requested the FundamentalLookup element has a sub element called CashFlowMethods (plural), which is made up of CashFlowMethod (singular) nodes. If the request was for Currencies, the FundamentalLookup element would have contained Currencies sub-element with Currency nodes.

22.22 Industry Classification Schema (ICS)

This chapter provides details and examples on taxonomies and their hierarchy as well as descriptive information for each industry code.

22.22.1 Overview

Companies in the Thomson Reuters Fundamental database (approx 39,000 companies as of May 2005) are all tagged with a number of industry classification tags. Each company is tagged with a Thomson Reuters Business Sector Schema (RBSS) code, up to ten North American Industry Classification System (NAICS) codes and up to ten Standard Industry Classification (SIC) codes. The ICS requests allow users to view the hierarchy for each of these three taxonomies, descriptive information for each industry code and the list of companies that have been assigned to each of these codes.

22.22.1.1 Reuters Business Sector Schema (RBSS)

The Reuters Business Sector Schema (RBSS) is a four-tier industry classification system introduced by Reuters in 2004. This replaces the two-tier classification system (MGIndustry) used previously by Thomson Reuters Fundamentals, (previously Muxtex Fundamentals). RBSS has xx sectors at the top level and 108 industries at the bottom level.

Thomson Reuters Business Classification (TRBC) has replaced Reuters Business Sector Schema (RBSS). TRBC is designed to keep track of the primary business engaged in by an entity. TRBC is market-oriented and aims to track the correlation between certain stocks and prices. TRBC is the revised version of RBSS.

In 2012, TRBC2012 replaced TRBC2009.

22.22.1.2 Standard Industry Classification (SIC)

Standard Industry Classification (SIC) codes were the primary classification system used by the US government until its replacement by the NAICS. The Bureau has revised the classification system a number of times, with the final revision in 1987. Thomson Reuters Fundamentals tagging is based on SIC 1987 definitions. While these codes were superseded by NAICS codes (see below) in 1997, the codes continue to have wide following, and therefore are maintained by Thomson Reuters.

22.22.1.3 North American Industry Classification System (NAICS)

The North American Industry Classification System (NAICS) codes were introduced by the US Census Bureau to replace SIC codes. There have also been revisions of NAICS codes; Thomson Reuters Fundamentals currently uses the definitions published in 1997.

22.22.1.4 Industry Tagging

As described above, each company in the database is tagged with one RBSS code, and up to ten SIC and NAICS codes. In addition, if companies self-report SIC and/or NAICS codes, these are also provided - a special flag is used to indicate company reported codes. Most US companies will list one SIC or NAICS code.



Industry tagging is based on Thomson Reuters- understanding of the company's main line of business, as described by the company in its financials reports, including management discussion and analysis, business segment reporting etc. Industry tagging is reviewed at least once a year, with more frequent reviews if company announces a substantial change in its business lines due to expansion, contraction, M&A activity etc.

22.22.2 ICS Requests

There are two requests that can be used to retrieve ICS information:

- **FindIndustryClassificationSchema_1** request - retrieves information about an industry and all its 'children' industries.
- **GetIndustryClassificationSchemaFullHierarchy_1** request - retrieves full hierarchy for a Taxonomy type specified in the request.

22.22.2.1 Find Industry Classification Schema (FindIndustryClassificationSchema_1)

This request allows a user to pass a taxonomy type and a sector/industry code, and see information about that industry and all its 'children' industries. For all industries returned, an industry code and title, and optional descriptions, are provided. A further option allows the user to ask to see Report Numbers (unique company identifiers) for all companies that belong to these industries.

The request has the following attributes:

FindIndustryClassificationSchema_1 Request Attributes		
Attribute Name	Required	Description
TaxonomyCode	x	Code for Taxonomy of interest.
IndustryCode	x	Code for industry within the specified Taxonomy.
WantToSeeCompanies		Default value is 'false'.
WantToSeeDescriptions		Default value is 'false'.
LanguageCode		Default values is 'en-US'.

The attribute <TaxonomyCode> can take one of the following values:

Taxonomy Codes	
Code	Description
RBSS2004	Thomson Reuters Business Sector Schema, a 4-tier schema introduced by Reuters in 2004. See section Reuters Business Sector Schema (RBSS) for more detail.
NAICS1997	NAICS codes introduced in 1997. See section North American Industry Classification System (NAICS) for more detail.
SIC1987	1987 SIC codes, replaced by NAICS codes in 1997. See section Standard Industry Classification (SIC) for more detail.

XML Sample Request - Searching for Industry Classification Schema

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Fundamentals/Fundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1/FindIndustryClassificationSchema_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <FindIndustryClassificationSchema_Request_1 xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1"
      TaxonomyCode="RBSS2004" IndustryCode="50" WantToSeeCompanies="true" WantToSeeDescriptions="true" LanguageCode="en-US" />
  </Body>
</Envelope>
```



```
</Envelope>
```

The response to the FindICSRequest method contains two parts: Parent and Children.

- **Parent element** is displayed if the requested industry has any parents - i.e. it is NOT displayed for requests for the highest level Economic Sector codes. The Parent element contains the attributes Code, Mnemonic, Title and Description.
- **Children container** element contains within it the hierarchy of industry codes that belong to the requested industry code. Each 'Child' element within the Children container element contains four attributes similar to the 'Parent' element described above.

XML Sample Response - Searching for Industry Classification Schema

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1/
    FindIndustryClassificationSchema_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-14T12:56:25.3036846Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <FindIndustryClassificationSchema_Response_1 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.
    org/2001/XMLSchema" xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1">
      <Industry Code="50" Mnemonic="ENER" Title="Energy" Description="The Energy economic sector consists of companies engaged in the
      exploration, extraction and refining of coal, oil and natural gas." xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/
      IndustryClassification_1">
        <Children>
          <Child Code="501" Mnemonic="ENER" Title="Energy" Description="The Energy business sector consists of companies engaged in
          the exploration, extraction and refining of coal, oil and natural gas.">
            <Children>
              <Child Code="5011" Mnemonic="COAL" Title="Coal" Description="The Coal industry group consists of companies engaged in the
              mining and beneficiating of coal and providing support service for coal.">
                <Children>
                  <Child Code="50111" Mnemonic="50111" Title="Coal" Description="The coal industry consists of companies engaged in the
                  exploration, mining, beneficiating, crushing, screening, washing and sizing of coal and other alternative energy resources. The industry also
                  includes companies engaged in testing, tunneling, blasting, training, and other contract based coal related services. The coal industry
                  excludes: (coal tar for paving, classified in Construction Materials), (coal breakers, cutters, and pulverizers manufacturing, classified in
                  Construction Agricultural Machinery), (coke coal, classified in Steel), (coal tar resin and distillation, classified in Chemicals - Commodity.)">
                    <Children />
                    <Companies>
                      <Company RepoNo="0066A" />
                      ...
                      <Company RepoNo="B3C3A" />
                    </Companies>
                    ...
                  </Industry>
                </FindIndustryClassificationSchema_Response_1>
              </Children>
            </Child>
          </Children>
        </Industry>
      </FindIndustryClassificationSchema_Response_1>
    </s:Body>
  </Envelope>
```

Attribute	Description
Code	Unique code (per taxonomy) for the industry code.
Mnemonic	A mnemonic for the code; values available only for RBSS codes.
Title	A descriptive title.
Description	Optional description of this industry, available for RBSS Taxonomy only.
Companies	Container element, contains list of Report Numbers (RepoNos), of constituent companies, for the lowest tier of the hierarchy.



22.22.2.2 Get Industry Classification Schema Full Hierarchy (GetIndustryClassificationSchemaFullHierarchy 1)

This request allows the user to pass a taxonomy type and see the full hierarchy for that taxonomy. It also allows the user to see textual descriptions for the various industry types returned.

The request for this method has the following attributes:

GetIndustryClassificationSchemaFullHierarchy_1 Request Attributes		
Attribute Name	Required	Description
TaxonomyCode	x	Code for Taxonomy of interest. See table Taxonomy Codes in section Find Industry Classification Schema for more details.
WantToSeeDescriptions	x	Default value is 'false'.
LanguageCode		Default values is 'en-US'.

XML Sample Request - Getting Industry Classification Schema Full Hierarchy

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Fundamentals/Fundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1/GetIndustryClassificationSchemaFullHierarchy_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetIndustryClassificationSchemaFullHierarchy_Request_1 xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1" TaxonomyCode="RBSS2004" WantToSeeDescriptions="true" LanguageCode="en-US" />
  </Body>
</Envelope>
```

The response to the `GetFullICSHierarchy` method produces the full hierarchy for the requested taxonomy. For example, for the RBSS2004 taxonomy, it will provide all Economic Sectors, all Business Sectors, all Industry Groups and all Industries. For each type, a code and a title, and optionally a description is provided.

A list of companies cannot be requested through this method, even though there will be empty elements in the response to denote placeholders for constituent companies.

The response will begin with the 'Industry' element to denote the highest level of the hierarchy, the Economic Sector. Within this element, the Code, Mnemonic, Title and Description are attributes. These are identical to the list of attributes described below for the 'Child' element.

Each Industry then will have multiple 'Children' sub-elements, which contain the hierarchy of Business Sectors, Industry Groups and Industries that belong to the Economic Sector. Each Child Element has a structure parallel to the Industry Element structure, with the Code, Mnemonic, Title and Description elements. Each Child element may also have a 'Children' sub-element to denote the hierarchy of industries that belong to the Child.

XML Sample Response - Getting Industry Classification Schema Full Hierarchy

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1/FindIndustryClassificationSchema_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-14T12:56:25.3036846Z</Date>
      <DoNotStore />
    </CacheResponse>
  </s:Header>
  <s:Body>
    <FindIndustryClassificationSchema_1_Reply>
      <FindIndustryClassificationSchema_1_Reply>
        <FindIndustryClassificationSchema_1_Reply>
          <FindIndustryClassificationSchema_1_Reply>
            <FindIndustryClassificationSchema_1_Reply>
              <FindIndustryClassificationSchema_1_Reply>
                <FindIndustryClassificationSchema_1_Reply>
                  <FindIndustryClassificationSchema_1_Reply>
                    <FindIndustryClassificationSchema_1_Reply>
                      <FindIndustryClassificationSchema_1_Reply>
                        <FindIndustryClassificationSchema_1_Reply>
                          <FindIndustryClassificationSchema_1_Reply>
                        </FindIndustryClassificationSchema_1_Reply>
                      </FindIndustryClassificationSchema_1_Reply>
                    </FindIndustryClassificationSchema_1_Reply>
                  </FindIndustryClassificationSchema_1_Reply>
                </FindIndustryClassificationSchema_1_Reply>
              </FindIndustryClassificationSchema_1_Reply>
            </FindIndustryClassificationSchema_1_Reply>
          </FindIndustryClassificationSchema_1_Reply>
        </FindIndustryClassificationSchema_1_Reply>
      </FindIndustryClassificationSchema_1_Reply>
    </s:Body>
  </s:Envelope>
```

```

<a:RelatesTo>[MessageID]</a:RelatesTo>
</s:Header>
<s:Body>
  <GetIndustryClassificationSchemaFullHierarchy_Response_1 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:
xsd="http://www.w3.org/2001/XMLSchema" xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1">
    <Industry Code="50" Mnemonic="ENER" Title="Energy" Description="The Energy economic sector consists of companies engaged
in the exploration, extraction and refining of coal, oil and natural gas." xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/
IndustryClassification_1">
      <Children>
        <Child Code="501" Mnemonic="ENER" Title="Energy" Description="The Energy business sector consists of companies engaged in the
exploration, extraction and refining of coal, oil and natural gas.">
          <Children>
            <Child Code="5011" Mnemonic="COAL" Title="Coal" Description="The Coal industry group consists of companies engaged in the
mining and beneficiating of coal and providing support service for coal.">
              <Children>
                <Child Code="50111" Mnemonic="50111" Title="Coal" Description="The coal industry consists of companies engaged in the
exploration, mining, beneficiating, crushing, screening, washing and sizing of coal and other alternative energy resources. The industry also
includes companies engaged in testing, tunneling, blasting, training, and other contract based coal related services. The coal industry
excludes: (coal tar for paving, classified in Construction Materials), (coal breakers, cutters, and pulverizers manufacturing, classified in
Construction Agricultural Machinery), (coke coal, classified in Steel), (coal tar resin and distillation, classified in Chemicals - Commodity.)">
                <Children />
                <Companies />
              </Child>
            </Children>
          <Companies />
        </Child>
      </Children>
    </Industry>
  </GetIndustryClassificationSchemaFullHierarchy_Response_1>
</Body>
</Envelope>

```

Attribute	Description
Code	Unique code (per taxonomy) for the industry code.
Mnemonic	A mnemonic for the code; values available only for RBSS codes.
Title	A descriptive title.
Description	Optional description of this industry, available for RBSS Taxonomy only.
Companies	Container element, contains list of Report Numbers (RepoNos), of constituent companies, for the lowest tier of the hierarchy.

22.23 Fundamental Reports

Thomson Reuters Fundamental Reports have been created to meet the demands of users who primarily intend to display or print information about publicly traded companies. The reports contain general information such as business descriptions and officer names, historical financial statements, estimated financials variables and a number of frequently used ratios.

Currently the following reports are available:

- **Get Snapshot Reports (GetSnapshotReports_1)** retrieves a company description, address, contact details, officer names and a limited number of financial ratios and estimates.
- **Get Financial Statements Reports (GetFinancialStatementsReports_1)** contains six years of financials and five quarters (or interims) of financials. Financials include I/S, B/S and C/F.
- **Get Ratios Reports (GetRatiosReports_1)** contains a larger (compared to Snapshot report) number of financial ratios and estimate figures.

The reports contain information on all active companies available on the Thomson Reuters financial database. As of January 2004, there were over 26,000 active companies including US and non-US, in the Thomson Reuters financial database. No reports are generated for the 7,500+ inactive companies in the database.

22.23.1 Get Ratios Reports (GetRatiosReports_1)

The Ratio Reports contain three sets of information:

- **Ratios:** ~40 commonly used ratios based on pricing data and historical financials.
- **Forecasted data:** 10 frequently used forecasted metrics, including consensus recommendation, target price, projected sales, eps, etc.
- **Estimates trend:** Trend in analyst recommendation for the company over the past three months.

The following tables list detailed information provided by each of the three sections:

1. Ratios

Category	Ratio
Pricing:	• Current price • 52 wk hi/lo • Pricing date • Volume (avg last ten days) • Market cap
Per Share Data:	• EPS excluding extraordinary items • EPS Normalized • BV per share • Tangible BV per share • Cash per share • Cash flow per share • Indicated Annual Dividend (currently US)
Valuation:	• P/E excluding extraordinary items • P/E Normalized • P/Sales • P/Tangible book • P/Cash Flow
Financial Strength:	• Current ratio • Quick ratio • LT debt/equity • Total debt/equity • Payout ratio

2. Forecasted Data

Category	Ratio
Income Statement	• Revenue • EBITDA • Earnings before taxes • Net Income • Normalized earnings before taxes • Normalized Net Income
Margins	• Gross margin • Net Profit margin • Operating margin • Pretax margin
Mgmt effectiveness	• ROA • ROE • ROI
Growth (US only)	• (qoprioryearq, yoy, 5 yr compound) • Sales • EPS • Dividend growth

3. Estimates Trend



Recommendation analysis (35 items - 1-6+mean x 5 periods)	North America	Non-North America
Target Price		
Proj. LT Growth Rate		
P/E	curr yr	curr yr
Price/Sales	curr yr	curr yr
Sales/Share	curr yr	curr yr
EPS surprise (actual, estimate, surprise, %)	prev yr/qrt	prev yr
Sales (mean/median, high, low, # est)	curr yr/qrt	curr yr
EPS (mean/median, high, low, # est)	curr yr/qrt	curr yr
Profit (mean/median, high, low, # est)	n/a	curr yr
DPS (mean/median, high, low, # est)	n/a	curr yr

Note: Not all items are available for all companies.

The following request retrieves Ratios Reports for IBM.

XML Sample Request - Getting Ratios Reports

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Fundamentals/Fundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1/
    GetRatiosReports_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetRatiosReports_Request_1 xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1" xmlns:xsi="http://www.
    w3.org/2001/XMLSchema-instance" companyId="IBM.N" companyIdType="RIC" includeMedians="true"/>
  </Body>
</Envelope>
```

If you set 'includeMedians' to true, this will allow you to retrieve median content.

Median Data consists of Industry/Sector Median of Fundamental Data items. Industry/Sector median will be the median value of the fundamental data for all the companies falling in the same industry/sector as of the company being retrieved. For example; if the user is pulling data for International Business Machines Corp <IBM.N> which falls in IT Services / Consulting industry, the Industry median will be calculated using the fundamental data for all the companies falling in this industry/sector.

Note: countryCode only applies if a TICKER was chosen for companyIdType and the TICKER entered does not specify the location of the company.

The response returns the following data:

XML Sample Response - Getting Ratios Reports

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1/GetRatiosReports_1_Reply</
    a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
```



```

xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <Date>2011-09-19T10:08:39.5851129Z</Date>
  <DoNotStore />
</CacheResponse>
<a:RelatesTo>[MessageID]</a:RelatesTo>
</s:Header>
<s:Body>
  <GetRatiosReports_Response_1 xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1">
    <FundamentalReports xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/FundamentalReportsPart_1">
      <ReportRatios Major="1" Minor="0" Revision="2" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/FundamentalReports_1">
        <CoIDs xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/CompanyContentCommon_1">
          <CoID Type="RepNo">4741N</CoID>
          <CoID Type="CompanyName">International Business Machines Corp.</CoID>
          <CoID Type="IRSNo">130871985</CoID>
          <CoID Type="CIKNo">0000051143</CoID>
        </CoIDs>
        <Issues xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/CompanyContentCommon_1">
          <Issue ID="1" Type="C" Desc="Common Stock" Order="1">
            <IssueID Type="Name">Common Stock</IssueID>
            <IssueID Type="Ticker">IBM</IssueID>
            <IssueID Type="RIC">IBM</IssueID>
            <IssueID Type="DisplayRIC">IBM.N</IssueID>
            <IssueID Type="InstrumentPI">261483</IssueID>
            <IssueID Type="QuotePI">1090370</IssueID>
            <Exchange Code="NYSE" Country="USA">New York Stock Exchange</Exchange>
            <MostRecentSplit Date="1999-05-27">2.0</MostRecentSplit>
          </Issue>
          <Issue ID="2" Type="P" Desc="Preferred Stock" Order="1">
            <IssueID Type="Name">Preferred Stock- 7.5%</IssueID>
            <IssueID Type="InstrumentPI">1883112</IssueID>
            <IssueID Type="QuotePI">25545447</IssueID>
            <Exchange Code="NYSE" Country="USA">New York Stock Exchange</Exchange>
          </Issue>
        </Issues>
        <CoGeneralInfo xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/CompanyContentCommon_1">
          <CoStatus Code="1">Active</CoStatus>
          <CoType Code="EQU">Equity Issue</CoType>
          <LastModified>2011-06-04</LastModified>
          <LatestAvailableAnnual>2010-12-31</LatestAvailableAnnual>
          <LatestAvailableInterim>2011-03-31</LatestAvailableInterim>
          <Employees LastUpdated="2010-12-31">426751</Employees>
          <SharesOut Date="2011-03-31" TotalFloat="1210221956.0">1211200199.0</SharesOut>
          <ReportingCurrency Code="USD">U.S. Dollars</ReportingCurrency>
          <MostRecentExchange Date="2011-06-06">1.0</MostRecentExchange>
        </CoGeneralInfo>
        <Ratios PriceCurrency="USD" ReportingCurrency="USD" ExchangeRate="1.00000" LatestAvailableDate="2011-03-31">
          <Group ID="Price and Volume">
            <Ratio FieldName="NPRICE" Type="N">176.49000</Ratio>
            ...
            <Ratio FieldName="MKTCAP" Type="N">213764.70000</Ratio>
          </Group>
          ...
          <Group ID="Growth">
            ...
          </Group>
        </Ratios>
        <ForecastData ConsensusType="Mean" CurFiscalYear="2008" CurFiscalYearEndMonth="12" CurInterimEndCalYear="2008" CurInterimEndMonth="3" EarningsBasis="PRX">
          <Ratio FieldName="ProjSales" Type="N">
            <Value PeriodType="CURR">-99999.99000</Value>
          </Ratio>
          ...
          <Ratio FieldName="ProjDPSNumOfEst" Type="N">
            <Value PeriodType="CURR">-99999.99000</Value>
          </Ratio>
        </ForecastData>
        <ConsRecommendationTrend>
          <STOpinion>
            <Opinion Code="1" Desc="BUY">
              <Value PeriodType="">3</Value>
            ...
            <Opinion Code="6" Desc="NA">
              <Value PeriodType="">0</Value>
            </Opinion>
          </STOpinion>
        </ConsRecommendationTrend>
      </ReportRatios>
    </FundamentalReports>
  </GetRatiosReports_Response_1>
</s:Body>

```



```

</STOpinion>
<MeanRating>
  <Value PeriodType="">2.214285</Value>
  ...
  <Value PeriodType="">1.916666</Value>
</MeanRating>
<NoOfAnalysts>
  <Value PeriodType="">0</Value>
  ...
  <Value PeriodType="">0</Value>
</NoOfAnalysts>
</ConsRecommendationTrend>
</ReportRatios>
</FundamentalReports>
<Medians xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/FundamentalReportsPart_1">
  <MedianDataItem>
    <Name>Operating Profit Margin Industry Median</Name>
    <Identifier>24965278</Identifier>
    <Value Type="Float">0.13509784</Value>
    <Period>q0</Period>
  </MedianDataItem>
  ...
  <MedianDataItem>
    <Name>Operating Profit Margin Sector Median</Name>
    <Identifier>4071301604</Identifier>
    <Value Type="Float">0.12654517</Value>
    <Period>y0</Period>
  </MedianDataItem>
</Medians>
</GetRatiosReports_Response_1>
</Body>
</Envelope>

```

Attribute	Description
CoIDs	These identifiers are issued at a company level therefore there is only one of each for every company. The required attribute 'RepoNo' is the permanent identifier for a company in the Thomson Reuters database.
Issues	This information allows user to cross-reference the issues with some commonly used identifiers, and also get other basic information on the issue.
CoGeneralInfo	This section provides general information pertaining to the primary issue and the most recent set of financials.
Historical Ratios	This section provides the pre-calculated ratios and values. Both issue level and company level ratios are provided. A total of up to 390 ratios may be available per company. • Ratios - Ratios is the container element for all ratios. It also includes information about currency types and the exchange rate between Reporting and Pricing Currency. The exchange rate is the direct rate for the Pricing Currency, i.e. Reporting Currency / Pricing Currency. Finally, it also has a date field to indicate the twelve month ending date. For US companies this date is the ending date of the most recent quarter; for non-US companies it is the ending date for the most recent annual. • Groups - The ratios in this file have been grouped for organizational purposes. Each group has a distinct name. • Ratio - Each ratio has two attributes as the types and field names. Types indicate if the ratio includes numeric "N" or a date "D" type data. Field Names are abbreviations for ratios and should be used in mapping with ratio descriptions.
Forecast Data	This section provides information on the latest Consensus Estimates and calculated Ratio's, including Revenues, EPS, P/E, Target Price and Long Term Growth Rate. All values within this section will be in Major Currency.
ConsRecommendationTrend	This section provides the trend of changes to broker recommendations over the previous three months. These recommendations are based on the Thomson Reuters Estimates Standardised Recommendation scale where Thomson Reuters will assign from one to five rating to each broker recommendation. Thomson Reuters will capture the substance of the recommendation rather than its ascribed name. We work with our contributors to ensure that we map our numerical rating to their preferred value. As such some broker-specific "Buy" recommendations may map to a value of 1, whereas others may map to a value of 2.
Medians	Contains a set of <MedianDataItems> which contains median content. They have the following sub-values: • Name - name of the median field name. • Identifier - this is Field Identifier. Each Median data is associated with a numerical identifier • Value Type - median Value for the corresponding field. Can be String, Integer, Float, Date.



- **Period** - period for which the Median Value corresponds to. Q0 stands for latest Fiscal Quarter, Y0 stands for latest Fiscal Year and R0 for Trailing twelve months, R-4 stands for Prior Trailing twelve months.

Note: The value '-99999.99000' means N/A (not available).

22.23.2 Get Financial Statements Reports (GetFinancialStatementsReports_1)

Financial Statements are provided for the six most recent annual statements and five most recent quarterly statement. The following table shows the information included in the report:

Category	Description
Issue Information	• Issue Type, Order and ID • Global Listings • Stock Splits
Company General Information	• Company Status • Company Type • Fiscal Period Information
Statement Information	• Balance Sheet Display Code • Cash Flow Method
Financial Statements	• Financial statements notes • Financial Statement Map (COA) • Fiscal Period • Period Length and Period Type • Update types • Statement Date • Auditor Name and Opinion • Source Date • LineItem

Note: Not all items are available for all companies.

The information retrieved presents all annual periods followed by all interim periods, both in reverse chronological order. Within each fiscal period (e.g. the 2000 annual period or the Q3 2002 interim period) statements are presented in the order: Income Statement, Balance Sheet, Statement of Cash Flows.

The following example shows how to retrieve Financial Statements Report for Microsoft.

XML Sample Request - Getting Financial Statements Reports with Median Content

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Fundamentals/Fundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1/GetFinancialStatementsReports_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetRatiosReports_Request_1 xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1" companyId="IBM.N" companyIdType="RIC" includeMedians="true"/>
  </Body>
</Envelope>
```

If you set 'includeMedians' to true, this will allow you to retrieve median content.

Median Data consists of Industry/Sector Median of Fundamental Data items. Industry/Sector median will be the median value of the fundamental data for all the companies falling in the same industry/sector as of the company being retrieved. For example; if the user is pulling data for International Business Machines Corp <IBM.N> which falls in IT Services / Consulting



industry, the Industry median will be calculated using the fundamental data for all the companies falling in this industry/sector.

Note: countryCode only applies if a TICKER was chosen for companyIDtype and the TICKER entered does not specify the location of the company.

The response returns the following data:

XML Sample Response - Getting Financial Statements Reports with Median Content

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1/
    GetFinancialStatementsReports_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-14T12:56:25.3036846Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetFinancialStatementsReports_Response_1 xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1">
      <FundamentalReports xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/FundamentalReportsPart_1">
        <ReportFinancialStatements Major="1" Minor="0" Revision="1" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/
        FundamentalReports_1">
          <CoIDs xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/CompanyContentCommon_1">
            <CoID Type="RepNo">4741N</CoID>
            <CoID Type="CompanyName">International Business Machines Corp.</CoID>
            <CoID Type="IRSNo">130871985</CoID>
            <CoID Type="CIKNo">0000051143</CoID>
          </CoIDs>
          <Issues xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/CompanyContentCommon_1">
            <Issue ID="1" Type="C" Desc="Common Stock" Order="1">
              <IssueID Type="Name">Common Stock</IssueID>
              <IssueID Type="Ticker">IBM</IssueID>
              <IssueID Type="RIC">IBM</IssueID>
              <IssueID Type="DisplayRIC">IBM.N</IssueID>
              <IssueID Type="InstrumentPI">261483</IssueID>
              <IssueID Type="QuotePI">1090370</IssueID>
              <Exchange Code="NYSE" Country="USA">New York Stock Exchange</Exchange>
              <MostRecentSplit Date="1999-05-27">2.0</MostRecentSplit>
            </Issue>
          </Issues>
          <CoGeneralInfo xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/CompanyContentCommon_1">
            <CoStatus Code="1">Active</CoStatus>
            <CoType Code="EQU">Equity Issue</CoType>
            <LastModified>2011-06-04</LastModified>
            <LatestAvailableAnnual>2010-12-31</LatestAvailableAnnual>
            <LatestAvailableInterim>2011-03-31</LatestAvailableInterim>
            <ReportingCurrency Code="USD">U.S. Dollars</ReportingCurrency>
            <MostRecentExchange Date="2011-06-06">1.0</MostRecentExchange>
          </CoGeneralInfo>
          <Notes>
            <CFAAvailability Code="1"></CFAAvailability>
            <IAvailability Code="1"></IAvailability>
            <ISIAvailability Code="1"></ISIAvailability>
            <BSIAvailability Code="1"></BSIAvailability>
            <CFIAvailability Code="1"></CFIAvailability>
          </Notes>
          <FinancialStatements>
            <COAMap>
              <mapItem coaltem="SREV" statementType="INC" lineID="100" precision="1">Revenue</mapItem>
              <mapItem coaltem="SORE" statementType="INC" lineID="300" precision="1">Other Revenue, Total</mapItem>
              ...
            </mapItem>
            <mapItem coaltem="SCIP" statementType="CAS" lineID="1040" precision="1">Cash Interest Paid</mapItem>
            <mapItem coaltem="SCTP" statementType="CAS" lineID="1050" precision="1">Cash Taxes Paid</mapItem>
          </COAMap>
          <AnnualPeriods>
            <FiscalPeriod Type="Annual" EndDate="2009-12-31" FiscalYear="2009">
              <Statement Type="INC">
                <FPHeader>
```




```

        <PeriodLength>12</PeriodLength>
        <periodType Code="M">Months</periodType>
        <UpdateType Code="UPD">Updated Normal</UpdateType>
        <StatementDate>2009-12-31</StatementDate>
        <AuditorName Code="PWCL">PricewaterhouseCoopers LLP</AuditorName>
        <AuditorOpinion Code="UNQ">Unqualified</AuditorOpinion>
        <Source Date="2010-02-23">10-K</Source>
    </FPHeader>
    <lineItem coaCode="SREV">95759.000000</lineItem>
    ...
    <lineItem coaCode="DDPS1">2.150000</lineItem>
    <lineItem coaCode="VDES">10.005790</lineItem>
</Statement>
...
</FiscalPeriod>
<FiscalPeriod Type="Interim" EndDate="2010-09-30" FiscalYear="2010" FiscalPeriodNumber="3">
    <Statement Type="INC">
        ...
    </Statement>
</FiscalPeriod>
</InterimPeriods>
</FinancialStatements>
</ReportFinancialStatements>
</FundamentalReports>
<Medians xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/FundamentalReportsPart_1">
    <MedianDataItem>
        <Name>Operating Profit Margin Industry Median</Name>
        <Identifier>24965278</Identifier>
        <Value Type="Float">0.13509784</Value>
        <Period>q0</Period>
    </MedianDataItem>
    <MedianDataItem>
        ...
    </MedianDataItem>
    <MedianDataItem>
        <Name>Operating Profit Margin Sector Median</Name>
        <Identifier>4071301604</Identifier>
        <Value Type="Float">0.12654517</Value>
        <Period>y0</Period>
    </MedianDataItem>
</Medians>
</GetFinancialStatementsReports_Response_1>
</Body>
</Envelope>

```

Attribute	Description
CoIDs	These identifiers are issued at a company level therefore there is only one of each for every company. The required attribute 'RepoNo' is the permanent identifier for a company in the Thomson Reuters database.
Issues	This information allows user to cross-reference the issues with some commonly used identifiers, and also get other basic information on the issue.
CoGeneralInfo	This section provides general information pertaining to the primary issue and the most recent set of financials.
Notes	This segment gives the user an indication of what financial statements are available for each company. At least one Annual Income Statement and Annual Balance Sheet will always be provided for every company in the Thomson Reuters Standardized Financials product (Income statement will be available for every fiscal period - annual or interim, and at least one annual balance sheet will be available for every company). The Annual Cash flow and Interim Financials (I/S, B/S, C/F) are not always available. Therefore we indicate which of these four reports are available for each company. If the report is available the associated code will be '1'. If the report is not available the associated code will be '0'. There is a generic code for all the interim statements, if the associated code is '1', at least one of the interim reports will be available, if the associated code is '0', none of the interim reports are available and their associated codes will also be zero. The following is an example of associated codes and their availability: • CFAAvailability Code="1" - Annual Cash flow available; • Iavailability Code="0" - Interims not available; • ISIAvailability Code="0" - Interim Income Statement not available; • BSAAvailability Code="0" - Interim Balance Sheet not available; • CFIAvailability Code="0" - Interim Cash Flow not available.



Financial Statements	This section is split into two main parts: • Financial Statement Map - with the purpose of laying out the order in which financial values will appear for each period. This map gives the line item COA code, description, LineID, the aggregation and precision levels, and the display type. • Financial Statement - This section provides financial statements for the company. Up to 6 annual statements and five interim statements are provided. Each Fiscal Period contains the following information: • Fiscal Period • Period Length and Period Type • Update types • Statement Date • Auditor Name and Opinion • Source Date • LineItem
Medians	Contains a set of <MedianDataItems> which contains median content. They have the following sub-values: • Name - name of the median field name. • Identifier - this is Field Identifier. Each Median data is associated with a numerical identifier • Value Type - median Value for the corresponding field. Can be String, Integer, Float, Date. • Period - period for which the Median Value corresponds to. Q0 stands for latest Fiscal Quarter, Y0 stands for latest Fiscal Year and R0 for Trailing twelve months, R-4 stands for Prior Trailing twelve months.

Note: The value '-99999.99000' means N/A (not available).

22.23.3 Get Snapshot Reports (GetSnapshotReports_1)

Snapshot Reports contain three sets of information:

Business Intelligence:

- Short business description;
- Financial summary;
- Address/Phone number;
- Web links;
- Industry/Sector information;
- Officer names/ages/titles;

Ratios – 20+ commonly used ratios based on pricing data and historical financials. They can be grouped by the following categories:

- **Pricing:**
 - Current price;
 - 52 week hi/lo;
 - Pricing date;
 - Volume (avg last ten days);
- **Size:**
 - Market cap;
 - Revenues;
 - EBITDA;
 - Net income;
 - No. of employees;
 - Enterprise value;
- **Per Share Data:**
 - EPS;
 - Rev per share;
 - BV per share;
 - Cash per share;
 - Cashflow per share;
 - Dividends per share;
- **Ratios:**
 - Gross margin;
 - ROE;



- Price/Sales;
- P/E;
- P/Book;

Forecasted Data – 8 frequently used forecasted matrix:

- Consensus recommendation;
- Target price;
- LT growth rate;
- Projected P/E (North America/Non-North American - current year);
- Sales (North America - current year, quarter; Non-North American - current year);
- EPS (North America - current year, quarter; Non-North American - current year);
- Profit (North America - n/a; Non-North American - current year);
- DPS (North America - n/a; Non-North American - current year).

Note: Not all items are available for all companies.

The request below retrieves Snap Shot reports for IBM.

XML Sample Request - Getting Snapshot Reports

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Fundamentals/Fundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1/GetSnapshotReports_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetSnapshotReports_Request_1 xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1" companyId="IBM.N"
      " companyIdType="RIC" includeMedians="true"/>
  </Body>
</Envelope>
```

If you set 'includeMedians' to true, this will allow you to retrieve median content.

Median Data consists of Industry/Sector Median of Fundamental Data items. Industry/Sector median will be the median value of the fundamental data for all the companies falling in the same industry/sector as of the company being retrieved. For example; if the user is pulling data for International Business Machines Corp <IBM.N> which falls in IT Services / Consulting industry, the Industry median will be calculated using the fundamental data for all the companies falling in this industry/sector.

Note: countryCode only applies if a TICKER was chosen for companyIdType and the TICKER entered does not specify the location of the company.

The response returns the following data:

XML Sample Response - Getting Snapshot Reports

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1/GetSnapshotReports_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
      xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2011-09-19T10:07:23.238479Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetSnapshotReports_Response_1 xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1">
```



```

<FundamentalReports xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/FundamentalReportsPart_1">
  <ReportSnapshot Major="1" Minor="0" Revision="1" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/
FundamentalReports_1">
    <CoIDs xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/CompanyContentCommon_1">
      <CoID Type="RepNo">4741N</CoID>
      <CoID Type="CompanyName">International Business Machines Corp.</CoID>
      <CoID Type="IRSNo">130871985</CoID>
      <CoID Type="CIKNo">0000051143</CoID>
    </CoIDs>
    <Issues xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/CompanyContentCommon_1">
      <Issue ID="1" Type="C" Desc="Common Stock" Order="1">
        <IssueID Type="Name">Common Stock</IssueID>
        <IssueID Type="Ticker">IBM</IssueID>
        <IssueID Type="RIC">IBM</IssueID>
        <IssueID Type="DisplayRIC">IBM.N</IssueID>
        <IssueID Type="InstrumentPI">261483</IssueID>
        <IssueID Type="QuotePI">1090370</IssueID>
        <Exchange Code="NYSE" Country="USA">New York Stock Exchange</Exchange>
        <MostRecentSplit Date="1999-05-27">2.0</MostRecentSplit>
      </Issue>
      <Issue ID="2" Type="P" Desc="Preferred Stock" Order="1">
        <IssueID Type="Name">Preferred Stock- 7.5%</IssueID>
        <IssueID Type="InstrumentPI">1883112</IssueID>
        <IssueID Type="QuotePI">25545447</IssueID>
        <Exchange Code="NYSE" Country="USA">New York Stock Exchange</Exchange>
      </Issue>
    </Issues>
    <CoGeneralInfo xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/
CompanyContentCommon_1">
      <CoStatus Code="1">Active</CoStatus>
      <CoType Code="EQU">Equity Issue</CoType>
      <LastModified>2011-06-04</LastModified>
      <LatestAvailableAnnual>2010-12-31</LatestAvailableAnnual>
      <LatestAvailableInterim>2011-03-31</LatestAvailableInterim>
      <Employees LastUpdated="2010-12-31">426751</Employees>
      <SharesOut Date="2011-03-31" TotalFloat="1210221956.0">1211200199.0</SharesOut>
      <ReportingCurrency Code="USD">U.S. Dollars</ReportingCurrency>
      <MostRecentExchange Date="2011-06-06">1.0</MostRecentExchange>
    </CoGeneralInfo>
    <TextInfo>
      <Text Type="Business Summary" lastModified="2010-11-01T09:27:04">International Business Machines Corporation (IBM) is
an information technology (IT) company. The Company operates under five segments: Global Technology Services segment
(GTS); Global Business Services segment (GBS); Software segment; System and Technology segment, and Global Financing
segment. In February 2010, the Company acquired Intelliden Inc. In March 2010, the Company completed the acquisition of
National Interest Security Company, LLC. In April 2010, the Company acquired Cast Iron Systems, which delivers cloud
integration software, appliances and services. In July 2010, it acquired BigFix, Inc. In August 2010, the Company acquired
Datacap Inc. In October 2010, the Company acquired Unica Corporation. In October 2010, the Company acquired PSS Systems.
In October 2010, the Company acquired OpenPages, a provider of software. In October 2010, the Company acquired Clarity
Systems. In November 2010, the Company acquired BLADE Network Technologies.</Text>
      ...
    </TextInfo>
    <contactInfo lastUpdated="2011-06-06T10:37:28">
      <streetAddress line="1">One New Orchard Road</streetAddress>
      <streetAddress line="2" />
      <streetAddress line="3" />
      <city>Armonk</city>
      <state-region>NY</state-region>
      <postalCode>10504</postalCode>
      <country code="USA">United States</country>
      <contactName />
      <contactTitle>Investor Relations</contactTitle>
      <phone>
        ...
      </phone>
    </contactInfo>
    <webLinks lastUpdated="2010-03-10T17:36:43">
      <webSite mainCategory="Home Page">http://www.ibm.com/</webSite>
      ...
      <webSite mainCategory="Employment Opportunities">http://www-03.ibm.com/employment/</webSite>
      <eMail mainCategory="" />
    </webLinks>
    <peerInfo lastUpdated="2011-06-06T10:37:28">
      <IndustryInfo>
        <Industry type="TRBC2009" order="1" reported="0" code="57201010" mnem="ITSE">IT Services / Consulting</Industry>
        <Industry type="RBSS2004" order="1" reported="0" code="57211" mnem="57211">IT Services & Consulting</Industry>
      </IndustryInfo>
    </peerInfo>
  </ReportSnapshot>
</FundamentalReports>

```



```

...
<Industry type="SIC" order="9" reported="0" code="6719" mnem="">Holding Companies, Nec</Industry>
</IndustryInfo>
<Indexconstituet>S&P 500</Indexconstituet>
<Indexconstituet>Dow Industry</Indexconstituet>
</peerInfo>
<officers>
  <officer rank="1" since="1997">
    ...
  </officer>
  ...
  <officer rank="10" since="2000">
    ...
  </officer>
</officers>
<Ratios PriceCurrency="USD" ReportingCurrency="USD" ExchangeRate="1.00000" LatestAvailableDate="2011-03-31">
  <Group ID="Price and Volume">
    <Ratio FieldName="NPRICE" Type="N">176.49000</Ratio>
    <Ratio FieldName="NHIG" Type="N">177.77000</Ratio>
    <Ratio FieldName="NLOW" Type="N">122.28000</Ratio>
    <Ratio FieldName="PDATE" Type="D">2011-07-08T00:00:00</Ratio>
    <Ratio FieldName="VOL10DAVG" Type="N">4.85877</Ratio>
    <Ratio FieldName="EV" Type="N">230776.70000</Ratio>
  </Group>
  <Group ID="Income Statement">
    ...
  </Group>
  <Group ID="Per share data">
    ...
  </Group>
  <Group ID="Other Ratios">
    ...
  </Group>
</Ratios>
<ForecastData ConsensusType="Mean" CurFiscalYear="2008" CurFiscalYearEndMonth="12"
CurInterimEndCalYear="2008" CurInterimEndMonth="3" EarningsBasis="PRX">
  <Ratio FieldName="ConsRecom" Type="N">
    <Value PeriodType="CURR">-99999.99000</Value>
  </Ratio>
  <Ratio FieldName="TargetPrice" Type="N">
    <Value PeriodType="CURR">-99999.99000</Value>
  </Ratio>
  ...
  <Ratio FieldName="ProjDPS" Type="N">
    <Value PeriodType="CURR">-99999.99000</Value>
  </Ratio>
</ForecastData>
</ReportSnapshot>
</FundamentalReports>
<Medians xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/FundamentalReportsPart_1">
  <MedianDataItem>
    <Name>Operating Profit Margin Industry Median</Name>
    <Identifier>24965278</Identifier>
    <Value Type="Float">0.13509784</Value>
    <Period>q0</Period>
  </MedianDataItem>
  ...
  <MedianDataItem>
    <Name>Operating Profit Margin Sector Median</Name>
    <Identifier>4071301604</Identifier>
    <Value Type="Float">0.12654517</Value>
    <Period>y0</Period>
  </MedianDataItem>
</Medians>
</GetSnapshotReports_Response_1>
</Body>
</Envelope>

```

Attribute	Description
CoIDs	These identifiers are issued at a company level therefore there is only one of each for every company. The required attribute 'RepoNo' is the permanent identifier for a company in the Thomson Reuters database.



Issues	This information allows user to cross-reference the issues with some commonly used identifiers, and also get other basic information on the issue.
CoGeneralInfo	This section provides general information pertaining to the primary issue and the most recent set of financials.
TextInfo	This segment provides various descriptive information sets on the company, including the following: • Business Summary - Short business description, limited to 1,000 characters; • Financial Summary - Summary of most recently reported results.
contactInfo	This section provides contact information for the company, including an address, a contact person with title, and phone/fax number(s).
webLinks	This section lists various commonly used web page addresses for the company, include home page, 'news releases' page, 'profile' page, the investor relations page etc. This section also contains a contact email address.
IndustryInfo	This section provides information on what industries, sectors and indices the company is a component of.
officers	This section provides information on company executives, including name, age, title(s) and source document where officer information was collected from. Codes are used to represent officer titles and source document types.
Ratios	This section provides the pre-calculated ratios and values. Both issue level and company level ratios are provided. A total of up to 390 ratios may be available per company.
ForecastData	This section provides information on the latest Consensus Estimates, including Revenues, EPS, P/E, Target Price and Long Term Growth Rate. All values within this section will be in Major Currency.
Medians	Contains a set of <MedianDataItems> which contains median content. They have the following sub-values: • Name - name of the median field name. • Identifier - this is Field Identifier. Each Median data is associated with a numerical identifier • Value Type - median Value for the corresponding field. Can be String, Integer, Float, Date. • Period - period for which the Median Value corresponds to. Q0 stands for latest Fiscal Quarter, Y0 stands for latest Fiscal Year and R0 for Trailing twelve months, R-4 stands for Prior Trailing twelve months.

Note: The value '-99999.99000' means N/A (not available).

22.24 Get TRBC Schema Full Hierarchy (GetTRBCSchemaFullHierarchy_1)

Thomson Reuters Business Classification (TRBC) is a market-oriented classification schema, created specifically to help investors better identify, analyze and track companies within markets. Thomson Reuters Business Classification (TRBC) has replaced Reuters Business Sector Schema (RBSS).

In 2012, TRBC2012 replaced TRBC2009. The following table summarizes the differences.

Level	TRBC2009	TRBC2012
Economic Sectors	10	10
Business Sectors	25	28
Industry Groups	52	54
Industries	124	131
Activities	N/A	846

TRBC is our proprietary, comprehensive, up-to-date and standardized industry definition system for global companies. This schema is more representative of the economic landscape and of client requirements than many other classification schemes. It contains new industry groups and has greater global company coverage than both GICS and ICB systems, with more than 70,000 equities tagged with over 10 years schema history.

Find below an example how to retrieve TRBC Schema Full Hierarchy:

XML Sample Request - Getting TRBC Schema Full Hierarchy

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Fundamentals/Fundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
```



```

<Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1/
GetTRBCSchemaFullHierarchy_1</Action>
<Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
  <ApplicationID>[AppID]</ApplicationID>
  <Token>[service token]</Token>
</Authorization>
</Header>
<Body>
  <GetTRBCSchemaFullHierarchy_Request_1 xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1"
  WantToSeeDescriptions="false" LanguageCode="en-US">
    </GetTRBCSchemaFullHierarchy_Request_1>
  </Body>
</Envelope>

```

The response to the GetTRBCSchemaFullHierarchy_1 method produces the full hierarchy for the taxonomies.

A list of companies cannot be requested through this method, even though there will be empty elements in the response to denote placeholders for constituent companies.

The response will begin with the 'Industry' element to denote the highest level of the hierarchy, the Economic Sector. Within this element, the Code, Mnemonic, Title and Description are attributes. These are identical to the list of attributes described below for the 'Child' element.

Each Industry then will have multiple 'Children' sub-elements, which contain the hierarchy of Business Sectors, Industry Groups and Industries that belong to the Economic Sector. Each Child Element has a structure parallel to the Industry Element structure, with the Code, Mnemonic, Title and Description elements. Each Child element may also have a 'Children' sub-element to denote the hierarchy of industries that belong to the Child.

XML Sample Response - Getting TRBC Schema Full Hierarchy

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1/
    GetTRBCSchemaFullHierarchy_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-14T12:56:25.3036846Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetTRBCSchemaFullHierarchy_Response_1 xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/Fundamentals_1">
      <Industry Code="50" Mnemonic="ENER" Title="Energy" Description="" xmlns="http://www.reuters.com/ns/2009/01/26/webservices/
      rkd/IndustryClassification_1">
        <Children>
          <Child Code="5010" Mnemonic="ENER" Title="Energy - Fossil Fuels" Description="">
            <Children>
              <Child Code="501010" Mnemonic="COAM" Title="Coal" Description="">
                <Children>
                  <Child Code="50101010" Mnemonic="COAM" Title="Coal" Description="">
                    <Children>
                      <Child Code="5010101010" Mnemonic="" Title="Coal - NEC" Description="">
                        <Children></Children>
                        <Companies></Companies>
                      </Child>
                      <Child Code="5010101011" Mnemonic="" Title="Coal Mining Support" Description="">
                        <Children></Children>
                        <Companies></Companies>
                      </Child>
                      <Child Code="5010101012" Mnemonic="" Title="Coal Wholesale" Description="">
                        <Children></Children>
                        <Companies></Companies>
                      </Child>
                    </Children>
                  <Companies></Companies>
                </Child>
              </Children>
            <Companies></Companies>
          </Child>
        </Children>
      </Industry>
    </GetTRBCSchemaFullHierarchy_Response_1>
  </s:Body>
</s:Envelope>

```



```

    </Child>
    <Child Code="501020" Mnemonic="OILG" Title="Oil & Gas" Description="">
      <Children>
        <Child Code="50102010" Mnemonic="OILI" Title="Integrated Oil & Gas" Description="">
          <Children>
            <Child Code="5010201010" Mnemonic="" Title="Integrated Oil & Gas" Description="">
              <Children></Children>
            <Companies></Companies>
          </Child>
        </Children>
      <Companies></Companies>
    </Child>
    <Child Code="50102020" Mnemonic="EXPL" Title="Oil & Gas Exploration and Production" Description="">
      <Children>
        ...
      </Children>
    <Companies></Companies>
  </Child>
</Children>
<Companies></Companies>
</Industry>
</GetTRBCSchemaFullHierarchy_Response_1>
</Body>
</Envelope>

```

Attribute	Description
Code	Unique code (per taxonomy) for the industry code.
Mnemonic	A mnemonic for the code; values available only for RBSS codes.
Title	A descriptive title.
Description	Optional description of this industry, available for RBSS Taxonomy only.
Companies	Container element, contains list of Report Numbers (RepoNos), of constituent companies, for the lowest tier of the hierarchy.



chapter 23 Lipper Asset Views

The Lipper Asset Views web service provides methods that allow the client to view a wide range of Lipper fundamental data for an asset.

The following methods are available through Lipper Asset Views service:

- **Get Asset Holdings (GetAssetHoldings_1)** - returns the assets holdings information.
- **Get Asset Overview (GetAssetOverview_1)** - returns a detailed overview for the specified asset.
- **Get Asset Quantitative Analysis (GetAssetQuantitativeAnalysis_1)** - returns the asset's quantitative analysis.

23.1 Authentication/Authorization, Service Endpoint, and Required Headers

Authorization

All requests to the Lipper Asset Views service require an authorization token. For details, see section Understanding Authentication Tokens.

Authentication

The Lipper Asset Views service uses Reuters impersonation tokens for each effective user. In this case, Thomson Reuters must create each user before your application authenticates them. Unmanaged effective users are not supported in the Lipper Asset Views service.

For additional information on creating a Service Token, see section Creating a Token.

Service Endpoint

Lipper Asset Views Endpoint

<http://api.rkd.reuters.com/api/LipperAssetViews/LipperAssetViews.svc>

Required Header

Required HTTP Headers

POST /api/LipperAssetViews/LipperAssetViews.svc HTTP/1.1
Content-Type: application/soap+xml
Host: api.rkd.reuters.com
Content-Length: [length]

23.2 WSDL

WSDL:

http://api.rkd.reuters.com/schemas/LipperAssetViews/wsd/LipperAssetViews_1_HttpAndRKDTToken.wsdl

23.3 Get Asset Holdings (GetAssetHoldings_1)

You can use the GetAssetHoldings_1 method to retrieve Lipper allocation, portfolio, and fund characteristic data for the specified asset(s).

The example below gets asset holdings details for the asset with '40000700' LipperID:

XML Sample Request - Getting Asset Holdings

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperAssetViews/LipperAssetViews.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2010/03/17/webservices/rkd/LipperAssetViews_1/GetAssetHoldings_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetAssetHoldings_Request_1 xmlns="http://www.reuters.com/ns/2010/03/17/webservices/rkd/LipperAssetViews_1">
      <lipperID>40000700</lipperID>
      <language>LanguageNeutral</language>
      <currencyCode>None</currencyCode>
    </GetAssetHoldings_Request_1>
  </Body>
</Envelope>

```

Parameter	Description
lipperID	A unique eight- or nine-digit number that identifies an asset.
currencyCode	The display currency for the returned data. For full listing of available currency codes, see section Currency Code Enumeration in the Lipper Data Enumerations chapter.
language	The display language for the returned data.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

The response returns the analysis details for the specified asset ('40000700'):

XML Sample Response - Getting Asset Holdings

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2010/03/17/webservices/rkd/LipperAssetViews_1/GetAssetHoldings_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetAssetHoldings_Response_1 xmlns="http://www.reuters.com/ns/2010/03/17/webservices/rkd/LipperAssetViews_1">
      <AssetHoldingsResult>
        <TotalNetAsset>
          <LipperId>40000700</LipperId>
          <TotalNetAssetList>
            <TotalNetAssetItem>
              <DataDate>2010-12-31</DataDate>
              <CurrencyCode>None</CurrencyCode>
              <TotalNetAssets xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
              <TotalNetAssetsInMillions xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
            </TotalNetAssetItem>
            ...
          </TotalNetAssetList>
        </TotalNetAsset>
        <AllocationSchemes>
          <AllocationSchemeType>
            <LipperId>40000700</LipperId>
            <AllocationSchemeId>Top10Holdings</AllocationSchemeId>
            <AllocationSchemeCode>HOLD</AllocationSchemeCode>
            <AllocationSchemeName>HLDG Top Holdings</AllocationSchemeName>
            <Language>English</Language>
            <AllocationsOrganization>ByDateByItem</AllocationsOrganization>
          </AllocationSchemeType>
        </AllocationSchemes>
      </AssetHoldingsResult>
    </GetAssetHoldings_Response_1>
  </s:Body>
</s:Envelope>

```



```

    <AllocationsByDateByItem>
      <AllocationsByDate>
        <Date>2010-09-30T00:00:00</Date>
        <AllocationItems>
          <AllocationValueByItem>
            <AllocationItem>
              <Id>-1</Id>
              <Name>US TREASURY 4.000% 15-FEB-2015</Name>
              <Language>English</Language>
              <AllocationSchemeId>Top10Holdings</AllocationSchemeId>
              <Level>1</Level>
            </AllocationItem>
            <ChangeFromPrevious xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
            <Value>0.8</Value>
          </AllocationValueByItem>
          ...
        </AllocationItems>
      </AllocationsByDate>
    </AllocationsByDateByItem>
  </AllocationSchemeType>
  ...
</AllocationSchemes>
</AssetHoldingsResult>
</GetAssetHoldings_Response_1>
</Body>
</Envelope>

```

Element	Description
LipperId	A unique eight- or nine-digit number that identifies an asset.
TotalNetAssetList	A list of Total Net Asset Items that contains the asset's TNA values. Can have the following values: • DataDate - the date for which the TNA value is valid. • CurrencyCode - the currency code that represents the currency for the TNA value. • TotalNetAssets - the TNA value for the stated data date. • TotalNetAssetsInMillions - the TNA value in millions for the stated data date.
AllocationSchemes	The allocation schemes. Can have the following values: • AllocationSchemeId - the allocation scheme ID. • AllocationSchemeCode - the alphabetic allocation scheme code. • AllocationSchemeName - the allocation scheme name (e.g., asset's allocation). • Language - the Language ID that represents the data language for the allocation information. • AllocationsOrganization - the scheme structure. • AllocationsByDateByItem - the asset's list of allocations.
AllocationItem	Represents an asset's list of allocation values in date order. Can have the following values: • Id - A unique integer that identifies the item. • Name - The name of the item. • Language - The language of the item. • AllocationSchemeId - the allocation scheme ID. • Level - the allocation level. The level is 1 for all allocations except for ICB allocations, which are either level 1, 2, or 3. • ChangeFromPrevious - the change from previous. • Value - the value.

23.4 Get Asset Overview (GetAssetOverview_1)

You can use the `GetAssetOverview_1` method to retrieve a wide range of data such as allocation, portfolio, fund characteristic data, etc for the specified asset(s).

The example below gets asset overview information for the asset with '40000700' LipperID:

XML Sample Request - Getting Asset Overview

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperAssetViews/LipperAssetViews.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
  </Header>
  <Body>
    <GetAssetOverview_1 xmlns="http://www.w3.org/2005/08/addressing">
      <LipperId>40000700</LipperId>
    </GetAssetOverview_1>
  </Body>
</Envelope>

```



```

<Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2010/03/17/webservices/rkd/LipperAssetViews_1/
GetAssetOverview_1</Action>
<Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
  <ApplicationID>[AppID]</ApplicationID>
  <Token>[service token]</Token>
</Authorization>
</Header>
<Body>
  <GetAssetOverview_Request_1 xmlns="http://www.reuters.com/ns/2010/03/17/webservices/rkd/LipperAssetViews_1">
    <lipperID>40000700</lipperID>
    <language>English</language>
    <currencyCode>USD</currencyCode>
    <lipperLeaderScoreUniverse>ARG</lipperLeaderScoreUniverse>
  </GetAssetOverview_Request_1>
</Body>
</Envelope>

```

Parameter	Description
lipperID	A unique eight- or nine-digit number that identifies an asset.
language	The display language for the returned data.
currencyCode	The display currency for the returned data. For full listing of available currency codes, see section Currency Code Enumeration in the Lipper Data Enumerations chapter.
lipperLeaderScoreUniverse	The lipper leader universe. Please see section Universe Enumeration in the Lipper Data Enumerations chapter.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

The response returns the asset overview results for the specified asset ('40000700'):

XML Sample Response - Getting Asset Overview

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2010/03/17/webservices/rkd/LipperAssetViews_1/
    GetAssetHoldings_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetAssetOverview_Response_1 xmlns="http://www.reuters.com/ns/2010/03/17/webservices/rkd/LipperAssetViews_1">
      <AssetOverviewResult>
        <FundType>Bond</FundType>
        <LaunchDate>1974-05-28</LaunchDate>
        <QualifiedHistoryDate xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"></QualifiedHistoryDate>
        <GeographicalFocus>United States of America</GeographicalFocus>
        <Domicile>USA</Domicile>
        <AssetCurrency>USD</AssetCurrency>
        <PreviousAssetCurrency xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"></PreviousAssetCurrency>
        <ExDividendDate>2008-12-24</ExDividendDate>
        <DividendsPerYear>0</DividendsPerYear>
        <ObjectiveText>The Fund seeks to maximize current income and preserve capital by investing primarily in bonds rated A and above.</
        ObjectiveText>
        <IncomeDistribution>Paid</IncomeDistribution>
        <DividendPayment>0.0675</DividendPayment>
        <TNA>25627300000</TNA>
        <TNADate>2010-12-31</TNADate>
        <TNACurrency>USD</TNACurrency>
        <Price>
          <DataDate>2011-01-13</DataDate>
          <CurrencyCode>USD</CurrencyCode>
          <Nav>12.21</Nav>
          <NavEstimated>false</NavEstimated>
          <Offer xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"></Offer>
        </Price>
      </AssetOverviewResult>
    </GetAssetOverview_Response_1>
  </s:Body>
</s:Envelope>

```



```

<OfferEstimated xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"></OfferEstimated>
<Bid xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"></Bid>
<BidEstimated xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"></BidEstimated>
<Mid xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"></Mid>
<MidEstimated xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"></MidEstimated>
</Price>
<SupportCompanies>
  <FundSupportCompanyType>
    <LipperId>40000700</LipperId>
    <CompanyRole>Custodian</CompanyRole>
    <CompanyType>
      <Language>English</Language>
      <CompanyId>857810</CompanyId>
      <CompanyFullName>JP Morgan Chase Bank NA</CompanyFullName>
      <LipperId>0</LipperId>
      <CompanyCode>EKRH</CompanyCode>
      <CompanyShortName>JP Morgan Chase Bank NA</CompanyShortName>
      <BusinessName>Finance</BusinessName>
      <ContactInformation>
        <AddressLine1>Two Chase Manhattan Plaza</AddressLine1>
        <AddressLine3>NY</AddressLine3>
        <City>New York</City>
        <Postcode>10081</Postcode>
        <Telephone>212-552-2222</Telephone>
      </ContactInformation>
    </CompanyType>
  </FundSupportCompanyType>
  ...
</SupportCompanies>
<Benchmarks>
  <BenchmarkType>
    <LipperId>40000700</LipperId>
    <BenchmarkList>
      <BenchmarkItem>
        <Language>English</Language>
        <BenchmarkId>11025566</BenchmarkId>
        <BenchmarkName>Barclays Capital U.S. Aggregate Bond TR</BenchmarkName>
        <BenchmarkCategory>AssetManager</BenchmarkCategory>
        <ShortBenchmarkName>Barclays Capital U.S. Aggregate Bond TR</ShortBenchmarkName>
      </BenchmarkItem>
      ...
    </BenchmarkList>
  </BenchmarkType>
</Benchmarks>
<MinimumInvestments>
  <MinimumInvestmentType>
    <LipperId>40000700</LipperId>
    <Language>LanguageNeutral</Language>
    <StartDate>1800-01-01</StartDate>
    <EndDate>4000-01-01</EndDate>
    <CurrencyCode>USD</CurrencyCode>
    <Name>Paid</Name>
    <MinimumInvestmentTypeId xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"></MinimumInvestmentTypeId>
    <MinimumInvestmentInitial>250</MinimumInvestmentInitial>
    <MinimumInvestmentRegular>50</MinimumInvestmentRegular>
    <MinimumInvestmentIRRegular xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"></
MinimumInvestmentIRRegular>
    <MinimumInvestmentInitialShare xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"></
MinimumInvestmentInitialShare>
  </MinimumInvestmentType>
</MinimumInvestments>
<Charges>
  <ChargesType>
    <LipperId>40000700</LipperId>
    <Name>American Funds Bond Fund of America;A</Name>
    <ChargesList>
      <ChargesItem>
        <DataDate>2000-03-15</DataDate>
        <ChargeId>777</ChargeId>
        <ChargeName>Initial</ChargeName>
        <Minimum xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"></Minimum>
        <Maximum xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"></Maximum>
        <Actual>2.5</Actual>
      </ChargesItem>
      ...
    </ChargesList>
  </ChargesType>

```



```

    </ChargesList>
  </ChargesType>
</Charges>
<LipperLeaderScores></LipperLeaderScores>
<Flags>
  <FlagType>
    <LipperId>40000700</LipperId>
    <Language>English</Language>
    <FlagList>
      <FlagItem>
        <FlagId>27301</FlagId>
        <FlagName>Reinvests on x-date</FlagName>
        <FlagCode>Y</FlagCode>
        <FlagValue>Yes</FlagValue>
      </FlagItem>
      ...
    </FlagList>
  </FlagType>
</Flags>
<CrossReferences>
  <CrossReferenceType>
    <LipperId>40000700</LipperId>
    <CrossReferenceList>
      <CrossReferenceItemValue>
        <Language>English</Language>
        <XrefId>26</XrefId>
        <ReferenceCode>RIC</ReferenceCode>
        <CodeShortName>RIC</CodeShortName>
        <CodeFullName>RIC</CodeFullName>
        <XrefValue>ABNDX.O</XrefValue>
      </CrossReferenceItemValue>
      ...
    </CrossReferenceList>
  </CrossReferenceType>
</CrossReferences>
<Classifications>
  <ClassSchemeType>
    <ClassSchemeId>2506</ClassSchemeId>
    <ClassSchemeCode>A</ClassSchemeCode>
    <ClassSchemeName>US Mutual Fund Objective</ClassSchemeName>
    <Language>English</Language>
    <ClassList>
      <ClassType>
        <ClassId>2507</ClassId>
        <ClassName>Corp Debt A Rated</ClassName>
        <Language>English</Language>
      </ClassType>
    </ClassList>
    <LipperId>40000700</LipperId>
  </ClassSchemeType>
  ...
</Classifications>
</AssetOverviewResult>
</GetAssetOverview_Response_1>
</Body>
</Envelope>

```

Element	Description
FundType	The type of the fund.
LaunchDate	The fund's launch date.
QualifiedHistoryDate	The qualified history date, which is the date at which the fund had a fundamental change in objective or strategy that makes performance data prior to this date irrelevant to the fund's current peer group.
GeographicalFocus	The fund's geographical focus.
Domicile	The asset's domicile.
AssetCurrency	The asset's currency.
PreviousAssetCurrency	The asset's previous currency.
ExDividendDate	The ex dividend date.



DividendsPerYear	The dividends per year.
ObjectiveText	The objective text, which is based up on information supplied in the fund's prospectus.
IncomeDistribution	The income distribution.
DividendPayment	The dividend payment.
TNA	The fund's total net assets (TNA).
TNADate	The TNA date.
TNACurrency	The currency of the TNA value.
Price	The price value. Can have the following sub-values: • DataDate - the date for which the price is valid. • CurrencyCode - the currency for the price data. • Nav - the net asset value price, which is the dollar value of a single mutual fund share, based on the value of the underlying assets of the fund minus its liabilities, divided by the number of outstanding shares. • NavEstimated - a flag that indicates if a calculated net asset value price was not supplied by the data provider so that an estimated value was used instead. • Offer - the launch offer, which is the first pricing of the fund after the subscription period is over plus the fund's initial sales charge. • OfferEstimated - a flag that indicates if a calculated offer value was not supplied by the data provider so that an estimated value was used instead. • Bid - the bid price, which is the net asset value minus redemption charges. • BidEstimated - a flag that indicates if a calculated bid value was not supplied by the data provider so that an estimated value was used instead. • Mid - the fund's first mid pricing after the subscription period is over (i.e., the mid-point between the bid and the offer). • MidEstimated - a flag that indicates if a calculated mid value was not supplied by the data provider so that an estimated value was used instead.
FundSupportCompanyType	Represents an asset's general company details. Can have the following values: • LipperId - the Lipper ID is an eight- or nine-digit number that represents an asset. • CompanyRole - the company role. • CompanyType - the asset's general company details. • Language - language ID. • CompanyId - the company's numeric ID. • CompanyFullName - the company's full name. • CompanyCode - the company's alphabetic code. • CompanyShortName - the company's short name. • BusinessName - the company's business name. • ContactInformation - the company's contact information.
BenchmarkItem	Represents a single benchmark for an asset. Can have the following sub-values: • BenchmarkId - the benchmark ID. • BenchmarkName - the benchmark name. • BenchmarkCategory - the benchmark category. • ShortBenchmarkName - the short benchmark name.
MinimumInvestmentType	Represents an asset's minimum investment data, including minimum regular investment, minimum irregular investment, minimum investment, and minimum initial share investment. Can have the following sub-values: • StartDate - the minimum investment start date. • EndDate - the minimum investment end date. • CurrencyCode - the currency code of the currency in which the minimum investment data is expressed. • Name - the asset name. • MinimumInvestmentTypeId - the minimum investment id. • MinimumInvestmentInitial - the minimum initial investment amount. • MinimumInvestmentRegular - the minimum amount of investment that can be accepted on a regular basis, such as to be part of a regular savings plan. • MinimumInvestmentIRRegular - the minimum number of shares or currency amount that investors can subsequently invest in the fund (on an ad hoc basis) after purchasing initial shares. • MinimumInvestmentInitialShare - minimum initial share investment.
ChargesList	The list of all the charges for the asset. Contains the following elements: • DataDate - the data date for the charge. • ChargeId - the numeric ID of the charge item. • ChargeName - the name of the charge.



	• Minimum - the minimum charge for the charge item. • Maximum - the maximum charge for the charge item. • Actual - the actual charge for the item.
FlagList	The asset's list of flags and values. A flag represents an attribute that Lipper has assigned to the asset. Contains the following elements: • FlagId - the numeric flag ID. • FlagName - the name of the flag. • FlagCode - the alphabetic flag code. • FlagValue - the flag value, which is either Yes or No. If the value of this flag is yes, then the fund is listed on an exchange.
CrossReferenceList	The asset's list of cross-reference codes. Contains the following elements: • Language - the display language for the cross-reference information. • XrefId - the numeric Cross-reference ID. • ReferenceCode - the alphabetic cross-reference code (e.g., the five-character symbol for a NASDAQ cross-reference). • CodeShortName - the cross-reference short name (e.g., NASDAQ Ticker). • CodeFullName - the full name of the cross-reference. • XrefValue - the value for the cross reference code.
ClassSchemeId	The classification scheme's numeric ID.
ClassSchemeCode	The classification scheme's numeric code.
ClassSchemeName	The name of the classification scheme.
ClassList	The asset's classification list for the classification scheme set in ClassSchemeName. Contains the following elements: • ClassId - the classification type's numeric ID. • ClassName - the name of the classification type. • Language - the display language for classification data.

23.5 Get Asset Quantitative Analysis (GetAssetQuantitativeAnalysis_1)

You can use the GetAssetQuantitativeAnalysis_1 method to retrieve asset's quantitative analysis.

The example below gets asset quantitative analysis for the asset with '40000700' LipperID:

XML Sample Request - Getting Asset Quantitative Analysis

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperAssetViews/LipperAssetViews.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2010/03/17/webservices/rkd/LipperAssetViews_1/GetAssetQuantitativeAnalysis_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetAssetQuantitativeAnalysis_Request_1 xmlns="http://www.reuters.com/ns/2010/03/17/webservices/rkd/LipperAssetViews_1">
      <lipperID>40000700</lipperID>
      <language>English</language>
      <currencyCode>USD</currencyCode>
    </GetAssetQuantitativeAnalysis_Request_1>
  </Body>
</Envelope>
```

Parameter	Description
lipperID	A unique eight- or nine-digit number that identifies an asset.
currencyCode	The display currency for the returned data. For full listing of available currency codes, see section Currency Code Enumeration in the Lipper Data Enumerations chapter.
language	The display language for the returned data.



Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

The response returns the analysis details for the specified asset ('40000700'):

XML Sample Response - Getting Asset Quantitative Analysis

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2010/03/17/webservices/rkd/LipperAssetViews_1/
    GetAssetHoldings_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetAssetQuantitativeAnalysis_Response_1 xmlns="http://www.reuters.com/ns/2010/03/17/webservices/rkd/LipperAssetViews_1">
      <AssetQuantitativeAnalysisResult>
        <AssetName>American Funds Bond Fund of America;A</AssetName>
        <AssetId>40000700</AssetId>
        <AssetNameLanguage>English</AssetNameLanguage>
        <Currency>USD</Currency>
        <TechnicalIndicatorBenchmark>
          <Language>English</Language>
          <BenchmarkId>11000490</BenchmarkId>
          <BenchmarkName>BofA Merrill Lynch U.S. Corporate Master TR</BenchmarkName>
          <BenchmarkCategory>TechnicalIndicator</BenchmarkCategory>
          <ShortBenchmarkName>BofA Merrill Lynch U.S. Corporate Master TR</ShortBenchmarkName>
        </TechnicalIndicatorBenchmark>
        <RiskFreeIndexBenchmark>
          <Language>English</Language>
          <BenchmarkId>11025615</BenchmarkId>
          <BenchmarkName>US Treasury Bills 3 Months TR</BenchmarkName>
          <BenchmarkCategory>RiskFreeIndex</BenchmarkCategory>
          <ShortBenchmarkName>US Treasury Bills 3 Months TR</ShortBenchmarkName>
        </RiskFreeIndexBenchmark>
        <AssetManagerBenchmark>
          <Language>English</Language>
          <BenchmarkId>11025566</BenchmarkId>
          <BenchmarkName>Barclays Capital U.S. Aggregate Bond TR</BenchmarkName>
          <BenchmarkCategory>AssetManager</BenchmarkCategory>
          <ShortBenchmarkName>Barclays Capital U.S. Aggregate Bond TR</ShortBenchmarkName>
        </AssetManagerBenchmark>
        <ClassificationBenchmark>
          <Language>English</Language>
          <BenchmarkId>19057061</BenchmarkId>
          <BenchmarkName>Lipper Global Bond USD Corporates</BenchmarkName>
          <BenchmarkCategory>Classification</BenchmarkCategory>
          <ShortBenchmarkName>Lipper Global Bond USD Corporates</ShortBenchmarkName>
        </ClassificationBenchmark>
        <CumulativePerformanceCalculations>
          <PerformanceCalculationType>
            <LipperId>11000490</LipperId>
            <PerformanceCalculationList>
              <PerformanceCalculationItem>
                <CurrencyCode>USD</CurrencyCode>
                <StatTypeId>26594</StatTypeId>
                <Estimate>false</Estimate>
                <StartDate>2009-12-31</StartDate>
                <EndDate>2010-12-31</EndDate>
                <CalcPeriodName>1_year</CalcPeriodName>
                <Language>English</Language>
                <Value>9.51997</Value>
                <CalculationType>OneYearPerformanceToLastMonthEnd</CalculationType>
              </PerformanceCalculationItem>
              ...
            </PerformanceCalculationList>
          </PerformanceCalculationType>
          ...
        </CumulativePerformanceCalculations>
      </AssetQuantitativeAnalysisResult>
    </GetAssetQuantitativeAnalysis_Response_1>
  </s:Body>
</s:Envelope>
```



```

    </PerformanceCalculationType>
  </CumulativePerformanceCalculations>
  <CalendarYearCalculations>
    <RollingPerformancesAssetView>
      <LipperId>11000490</LipperId>
      <Currency>USD</Currency>
      <RollingPerformances>
        <RollingPerformanceType>
          <Value>4.39076</Value>
          <DataDate>2006-12-31</DataDate>
        </RollingPerformanceType>
        ...
      </RollingPerformances>
    </RollingPerformancesAssetView>
    ...
  </RollingPerformancesAssetView>
</CalendarYearCalculations>
<TechnicalAnalysisCalculations>
  <PerformanceCalculationType>
    <LipperId>40000700</LipperId>
    <PerformanceCalculationList>
      <PerformanceCalculationItem>
        <CurrencyCode>USD</CurrencyCode>
        <StatTypeId>26589</StatTypeId>
        <Estimate>true</Estimate>
        <StartDate>2009-12-31</StartDate>
        <EndDate>2010-12-31</EndDate>
        <Language>LanguageNeutral</Language>
        <Value>-0.03656</Value>
        <CalculationType>Alphafor1YeartoLastMonthEnd</CalculationType>
      </PerformanceCalculationItem>
      ...
    </PerformanceCalculationList>
  </PerformanceCalculationType>
</TechnicalAnalysisCalculations>
</AssetQuantitativeAnalysisResult>
</GetAssetQuantitativeAnalysis_Response_1>
</Body>
</Envelope>

```

Element	Description
AssetQuantitativeAnalysisResult	Shows the results of asset's quantitative analysis.
AssetName	Shows the asset name.
AssetId	Shows the asset id.
AssetNameLanguage	Shows the asset name language.
Currency	Shows the currency ID.
TechnicalIndicatorBenchmark	Shows the Technical Indicator Benchmark. Can have the following elements: • Language - the language for the benchmark information. • BenchmarkId - the Benchmark ID. • BenchmarkName - the name of the benchmark. • BenchmarkCategory - the benchmark category. • ShortBenchmarkName - the short benchmark name.
RiskFreeIndexBenchmark	Shows the Risk Free Index Benchmark.
AssetManagerBenchmark	Shows the Asset Manager Benchmark.
ClassificationBenchmark	Shows the Classification Benchmark.
PerformanceCalculationItem	The asset's performance calculation list. Contains the following elements: • CurrencyCode - the currency code that represents the currency of the performance calculation data. • StatTypeId - the stat type id. • Estimate - a flag that indicates if the value of this performance calculation is an estimate. • StartDate - the start date for the time period used for the performance calculation. • EndDate - the end date for the time period used for the performance calculation.



	• CalcPeriodName - the name of the performance calculation. • Language - the display language for the performance calculation data. • Value - the value of the performance calculation. • CalculationType - the type of the calculation.
RollingPerformances AssetView	Shows rolling performance calculation for the given asset. Contains the following elements: • RollingPerformanceType - rolling performance calculation data point with date and value. • Value - The data value for the period. • DataDate - the date for which the data is valid.



chapter 24 Lipper Details

The Lipper Details section provides easy access to fund characteristics from Lipper's extensive database of collective investments, allowing clients to quickly find fund details based on hundreds of criteria items and to compare those funds across a wide range of timely characteristics.

Methods in this section are grouped under the following categories:

1. **Lipper Holdings** - GetCollectedAllocations_1 method gets Lipper allocation, portfolio, and fund characteristic data.
2. **Lipper Time Series** - GetPrice_1 and GetPrices_1 methods are used for retrieving fund prices on a single date or over a rolling period of time.
3. **Lipper Calculations** - GetBestWorstPerformance_1, GetRollingPerformance_1, GetStoredPerformanceByCalculationsFilter_1, GetStoredPerformanceCalculation_1, GetStoredPerformanceCalculations_1 methods are used for getting stored and dynamic Lipper performance calculation data.
4. **Lipper Fundamentals** - all other methods are used to retrieve a wide range of basic Lipper fund data.

24.1 Lipper Holdings

The Lipper Holdings section provides access to Lipper allocation, portfolio, and fund characteristic data from Lipper's extensive database.

24.1.1 Authentication/Authorization, Service Endpoint, and Required Headers

Authorization

All requests to the Lipper services require an authorization token. For details, see section Understanding Authentication Tokens.

Authentication

The Lipper services use Reuters impersonation tokens for each effective user. In this case, Thomson Reuters must create each user before your application authenticates them. Unmanaged effective users are not supported in the Lipper services.

For additional information on creating a Service Token, see section Creating a Token.

Service Endpoint

Lipper Holdings Endpoint

<http://api.rkd.reuters.com/api/LipperHoldings/LipperHoldings.svc>

Required Headers

Lipper Holdings Required HTTP Headers

POST /api/LipperHoldings/LipperHoldings.svc HTTP/1.1
Content-Type: application/soap+xml
Host: api.rkd.reuters.com
Content-Length: [length]

24.1.2 WSDL

Lipper Holdings WSDL:

http://api.rkd.reuters.com/schemas/LipperHoldings/wsdll/LipperHoldings_1_HttpAndRKDTOKEN.wsdl



24.1.3 Get Collected Allocations (GetCollectedAllocations_2)

You can use the GetCollectedAllocations_2 method to retrieve collected allocations for the given asset(s) as of the given effective date.

The example below retrieves collected allocations in English language for the 'Asset' allocation scheme as of the specified date for the specified assets:

XML Sample Request - Getting Collected Allocations

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperHoldings/LipperHoldings.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperHoldings_1/GetCollectedAllocations_2</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetCollectedAllocations_Request_2 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperHoldings_1">
      <lipperIDs>
        <int>65028707</int>
        <int>60003333</int>
      </lipperIDs>
      <allocation>Asset</allocation>
      <allocationDate>2008-12-12T09:30:47Z</allocationDate>
      <language>English</language>
    </GetCollectedAllocations_Request_2>
  </Body>
</Envelope>
```

Parameter	Description
lipperID	A unique eight- or nine-digit number that identifies an asset.
allocation	The allocation scheme. For full listing of allocation schemes see section Allocation Enumeration in the Lipper Data Enumerations chapter.
allocationDate	The allocation date.
language	The display language for the collected allocations data.

The response returns collected allocations data for the specified assets:

XML Sample Response - Getting Collected Allocations

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperHoldings_1/GetCollectedAllocations_2_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetCollectedAllocations_Response_2 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperHoldings_1">
      <CollectedAllocationsResult>
        <AllocationSchemeType>
          <LipperId>65028707</LipperId>
          <AllocationSchemeId>Asset</AllocationSchemeId>
          <AllocationSchemeCode>ASSTALL</AllocationSchemeCode>
        </AllocationSchemeType>
      </CollectedAllocationsResult>
    </GetCollectedAllocations_Response_2>
  </s:Body>
</s:Envelope>
```



```

    <AllocationSchemeName>Asset Allocation</AllocationSchemeName>
    <Language>English</Language>
    <AllocationsOrganization>ByItemByDate</AllocationsOrganization>
    <AllocationsByItemByDate>
      <AllocationItem>
        <Id>-1</Id>
        <Name>Liquid Assets</Name>
        <Language>English</Language>
        <AllocationSchemeId>Asset</AllocationSchemeId>
        <Level>1</Level>
        <ValuesByDate>
          <AllocationValueByDate>
            <Value>0.34</Value>
            <Date>2007-09-28</Date>
            <ChangeFromPrevious xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
          </AllocationValueByDate>
        </ValuesByDate>
        <ParentAllocationItemID xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
      </AllocationItem>
    <AllocationItem>
      <Id>-1</Id>
      <Name>Etc</Name>
      <Language>English</Language>
      <AllocationSchemeId>Asset</AllocationSchemeId>
      <Level>1</Level>
      <ValuesByDate>
        <AllocationValueByDate>
          <Value>99.66</Value>
          <Date>2007-09-28</Date>
          <ChangeFromPrevious xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
        </AllocationValueByDate>
      </ValuesByDate>
      <ParentAllocationItemID xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
    </AllocationItem>
  </AllocationsByItemByDate>
</AllocationSchemeType>
</CollectedAllocationsResult>
</GetCollectedAllocations_Response_2>
</Body>
</Envelope>

```

Element	Description
LipperId	The asset identifier of a particular collective investment within Lipper.
AllocationSchemeId	The allocation scheme ID.
AllocationSchemeCode	The alphabetic allocation scheme code.
AllocationSchemeName	The name of the allocation name.
Language	The display language for the collected allocations data.
AllocationsOrganization	The organization of collected allocations.
AllocationsByItemByDate	The asset's list of allocation values. Contains the following elements: • Id - a unique integer that identifies the item. • Name - the name of the item. • Language - the display language for the item. • AllocationSchemeId - the allocation scheme ID. • Level - the allocation level. The level is 1 for all allocations except for ICB allocations, which are either level 1, 2, or 3. • ValuesByDate - the asset's list of allocation values. Contains the following elements: • Value - the allocation value. • Date - the date for which the allocation data is valid. • ChangeFromPrevious - the change in value from the previous data date.
ParentAllocationItemID	The parent allocation item ID.



24.1.4 Get Collected Allocations IM (GetCollectedAllocationsIM_1)

The GetCollectedAllocationsIM_1 operation provides an unrestricted version of GetCollectedAllocations_2 and is available to Investment Management users.

The example below retrieves collected allocations in English language for the 'Asset' allocation scheme as of the specified date for the specified assets:

XML Sample Request - Getting Collected Allocations IM

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperHoldings/LipperHoldings.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperHoldings_1/GetCollectedAllocationsIM_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetCollectedAllocationsIM_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperHoldings_1">
      <lipperIDs>
        <int>60003333</int>
        <int>65028707</int>
      </lipperIDs>
      <allocation>Asset</allocation>
      <allocationPeriod>Current</allocationPeriod>
      <allocationDate>2011-07-04T00:00:00</allocationDate>
      <language>English</language>
    </GetCollectedAllocationsIM_Request_1>
  </Body>
</Envelope>
```

Parameter	Description
lipperID	A unique eight- or nine-digit number that identifies an asset.
allocation	The allocation scheme. For full listing of allocation schemes see section Allocation Enumeration in the Lipper Data Enumerations chapter.
allocationPeriod	Defines an allocation period. The possible values are: Current, Previous, Date and All.
allocationDate	The allocation date.
language	The display language for the collected allocations data.

The response returns collected allocations data for the specified assets:

XML Sample Response - Getting Collected Allocations IM

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperHoldings_1/GetCollectedAllocationsIM_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetCollectedAllocationsIM_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperHoldings_1">
      <CollectedAllocationsResult>
        <AllocationSchemeType>
```



```

<LipperId>60003333</LipperId>
<AllocationSchemeId>Asset</AllocationSchemeId>
<AllocationSchemeCode>ASSTALL</AllocationSchemeCode>
<AllocationSchemeName>Asset Allocation</AllocationSchemeName>
<Language>English</Language>
<AllocationsOrganization>ByItemByDate</AllocationsOrganization>
<AllocationsByItemByDate>
  <AllocationItem>
    <Id>-1</Id>
    <Name>US Equities</Name>
    <Language>English</Language>
    <AllocationSchemeId>Asset</AllocationSchemeId>
    <Level>1</Level>
    <ValuesByDate>
      <AllocationValueByDate>
        <Value>74.72</Value>
        <Date>2011-05-31</Date>
        <ChangeFromPrevious xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
      </AllocationValueByDate>
    </ValuesByDate>
    <ParentAllocationItemID xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
  </AllocationItem>
  <AllocationItem>
    <Id>-1</Id>
    <Name>Non-US Equities</Name>
    <Language>English</Language>
    <AllocationSchemeId>Asset</AllocationSchemeId>
    <Level>1</Level>
    <ValuesByDate>
      <AllocationValueByDate>
        <Value>23.53</Value>
        <Date>2011-05-31</Date>
        <ChangeFromPrevious xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
      </AllocationValueByDate>
    </ValuesByDate>
    <ParentAllocationItemID xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
  </AllocationItem>
</AllocationsByItemByDate>
</AllocationSchemeType>
....
</CollectedAllocationsResult>
</GetCollectedAllocationsIM_Response_1>
</Body>
</Envelope>

```

Element	Description
LipperId	The asset identifier of a particular collective investment within Lipper.
AllocationSchemeId	The allocation scheme ID.
AllocationSchemeCode	The alphabetic allocation scheme code.
AllocationSchemeName	The name of the allocation name.
Language	The display language for the collected allocations data.
AllocationsOrganization	The organization of collected allocations.
AllocationsByItemByDate	The asset's list of allocation values. Contains the following elements: • Id - a unique integer that identifies the item. • Name - the name of the item. • Language - the display language for the item. • AllocationSchemeId - the allocation scheme ID. • Level - the allocation level. The level is 1 for all allocations except for ICB allocations, which are either level 1, 2, or 3. • ValuesByDate - the asset's list of allocation values. Contains the following elements: • Value - the allocation value. • Date - the date for which the allocation data is valid. • ChangeFromPrevious - the change in value from the previous data date.
ParentAllocationItem	The parent allocation item ID.



mID

24.2 Lipper Time Series

The Lipper Time Series section provides easy access to fund prices on a single date or over a rolling period of time from Lipper's extensive database.

24.2.1 Authentication/Authorization, Service Endpoint, and Required Headers

Authorization

All requests to the Lipper services require an authorization token. For details, see section Understanding Authentication Tokens.

Authentication

The Lipper services use Reuters impersonation tokens for each effective user. In this case, Thomson Reuters must create each user before your application authenticates them. Unmanaged effective users are not supported in the Lipper services.

For additional information on creating a Service Token, see section Creating a Token.

Service Endpoint

Lipper Time Series Endpoint

<http://api.rkd.reuters.com/api/LipperTimeSeries/LipperTimeSeries.svc>

Required Headers

Lipper Time Series Required HTTP Headers

POST /api/LipperTimeSeries/LipperTimeSeries.svc HTTP/1.1
Content-Type: application/soap+xml
Host: api.rkd.reuters.com
Content-Length: [length]

24.2.2 WSDL

Lipper Time Series WSDL:

http://api.rkd.reuters.com/schemas/LipperTimeSeries/wsd/LipperTimeSeries_1_HttpAndRKDTOKEN.wsdl

24.2.3 Get Price (GetPrice_1)

You can use the GetPrice_1 method to retrieve the listed price for the given asset(s) on a given date.

This method is used to return the price for a single date for one or more funds. To get prices for a rolling period that contains multiple data points, use the GetPrices_1 method.

The example below gets price expressed in US dollars for the asset with '60003333' LipperID without including estimated prices:

XML Sample Request - Getting Price

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperTimeSeries/LipperTimeSeries.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperTimeSeries_1/GetPrice_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
```



```

<GetPrice_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperTimeSeries_1">
  <lipperIDs>
    <int>60003333</int>
  </lipperIDs>
  <dataDate>2008-01-23</dataDate>
  <currencyCode>USD</currencyCode>
  <allowEstimates>false</allowEstimates>
</GetPrice_Request_1>

</Body>
</Envelope>

```

Parameter	Description
lipperID	A unique eight- or nine-digit number that identifies an asset.
dataDate	The date for which the price will be returned.
currencyCode	The currency for the returned price. For full listing of available currency codes, see section Currency Code Enumeration in the Lipper Data Enumerations chapter.
allowEstimates	A flag that indicates if estimated prices are allowed in the result set.

The response returns the prices as of the dataDate for the specified assets:

XML Sample Response - Getting Price

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperTimeSeries_1/GetPrice_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetPrice_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperTimeSeries_1">
      <PriceResult>
        <PriceType>
          <LipperId>60003333</LipperId>
          <StartDate>2008-01-23</StartDate>
          <EndDate>2008-01-23</EndDate>
          <PriceList>
            <PriceItem>
              <DataDate>2008-01-23</DataDate>
              <CurrencyCode>USD</CurrencyCode>
              <Nav>16.4775561</Nav>
              <NavEstimated>false</NavEstimated>
              <Offer xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
              <OfferEstimated xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
              <Bid xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
              <BidEstimated xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
              <Mid xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
              <MidEstimated xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
            </PriceItem>
          </PriceList>
        </PriceType>
      </PriceResult>
    </GetPrice_Response_1>
  </s:Body>
</Envelope>

```

Element	Description
LipperId	The asset's Lipper ID.
StartDate	The start date for the price data.
EndDate	The end date for the price data.



PriceList	The price list. Contains the following elements: • DataDate - the date for which the price is valid. • CurrencyCode - the currency for the price data. • Nav - the net asset value price, which is the dollar value of a single mutual fund share, based on the value of the underlying assets of the fund minus its liabilities, divided by the number of outstanding shares. • NavEstimated - a flag that indicates if a calculated net asset value price was not supplied by the data provider so that an estimated value was used instead. • Offer - the offer price, which is the net asset value plus initial sales charges. • OfferEstimated - a flag that indicates if a calculated offer value was not supplied by the data provider so that an estimated value was used instead. • Bid - the bid price, which is the net asset value minus redemption charges. • BidEstimated - a flag that indicates if a calculated bid value was not supplied by the data provider so that an estimated value was used instead. • Mid - the mid price of the fund after the subscription period is over. This is the mid point between the bid and the offer. • MidEstimated - a flag that indicates if a calculated mid value was not supplied by the data provider so that an estimated value was used instead.

24.2.4 Get Price IM (GetPriceIM_1)

The GetPriceIM_1 method provides an unrestricted version of GetPrice_1 and is available to Investment Management users.

The example below gets price expressed in US dollars for the asset with '60003333' LipperID without including estimated prices:

XML Sample Request - Getting Price IM

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperTimeSeries/LipperTimeSeries.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperTimeSeries_1/GetPrice_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetPriceIM_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperTimeSeries_1">
      <lipperIDs>
        <int>60003333</int>
      </lipperIDs>
      <dataDate>2008-01-23</dataDate>
      <currencyCode>USD</currencyCode>
      <allowEstimates>true</allowEstimates>
    </GetPriceIM_Request_1>
  </Body>
</Envelope>
```

Parameter	Description
lipperID	A unique eight- or nine-digit number that identifies an asset.
dataDate	The date for which the price will be returned.
currencyCode	The currency for the returned price. For full listing of available currency codes, see section Currency Code Enumeration in the Lipper Data Enumerations chapter.
allowEstimates	A flag that indicates if estimated prices are allowed in the result set.

The response returns the prices as of the dataDate for the specified assets:

XML Sample Response - Getting Price IM



```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperTimeSeries_1/GetPriceIM_1_Reply</a:
    Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetPriceIM_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperTimeSeries_1">
      <PriceResult>
        <PriceType>
          <LipperId>60003333</LipperId>
          <StartDate>2008-01-23</StartDate>
          <EndDate>2008-01-23</EndDate>
          <PriceList>
            <PriceItem>
              <DataDate>2008-01-23</DataDate>
              <CurrencyCode>USD</CurrencyCode>
              <Nav>16.4775561</Nav>
              <NavEstimated>false</NavEstimated>
              <Offer xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
              <OfferEstimated xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
              <Bid xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
              <BidEstimated xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
              <Mid xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
              <MidEstimated xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
            </PriceItem>
          </PriceList>
        </PriceType>
      </PriceResult>
    </GetPriceIM_Response_1>
  </s:Body>
</Envelope>

```

Element	Description
LipperId	The asset's Lipper ID.
StartDate	The start date for the price data.
EndDate	The end date for the price data.
PriceList	The price list. Contains the following elements: • DataDate - the date for which the price is valid. • CurrencyCode - the currency for the price data. • Nav - the net asset value price, which is the dollar value of a single mutual fund share, based on the value of the underlying assets of the fund minus its liabilities, divided by the number of outstanding shares. • NavEstimated - a flag that indicates if a calculated net asset value price was not supplied by the data provider so that an estimated value was used instead. • Offer - the offer price, which is the net asset value plus initial sales charges. • OfferEstimated - a flag that indicates if a calculated offer value was not supplied by the data provider so that an estimated value was used instead. • Bid - the bid price, which is the net asset value minus redemption charges. • BidEstimated - a flag that indicates if a calculated bid value was not supplied by the data provider so that an estimated value was used instead. • Mid - the mid price of the fund after the subscription period is over. This is the mid point between the bid and the offer. • MidEstimated - a flag that indicates if a calculated mid value was not supplied by the data provider so that an estimated value was used instead.

24.2.5 Get Prices (GetPrices_1)

You can use the GetPrices_1 method to retrieve listed prices for the given asset(s) for a rolling period.

This method is used to get data for a rolling period with a start date and end date. To get a price for a single date, use the



GetPrice_1 method.

The example below gets price expressed in US dollars for the asset with '11006603' LipperID including estimated prices:

XML Sample Request - Getting Prices

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperTimeSeries/LipperTimeSeries.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperTimeSeries_1/GetPrices_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetPrices_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperTimeSeries_1">
      <lipperIDs>
        <int>11006603</int>
      </lipperIDs>
      <startDate>2007-01-27</startDate>
      <endDate>2009-03-27</endDate>
      <currencyCode>USD</currencyCode>
      <alignment>MonthEnd</alignment>
      <allowEstimates>true</allowEstimates>
    </GetPrices_Request_1>
  </Body>
</Envelope>
```

Parameter	Description
lipperID	A unique eight- or nine-digit number that identifies an asset.
startDate	The start date for the rolling period.
endDate	The end date for the rolling period.
currencyCode	The currency for the returned prices. For full listing of available currency codes, see section Currency Code Enumeration in the Lipper Data Enumerations chapter.
alignment	The alignment of the data in the result set. Can have the following values: • YearEnd - will include a datapoint for every year end in a given time period. • Month End - will include a datapoint for every month end in a given time period. • WeekEnd - will include a datapoint for every week end in a given time period. • Day - will include a datapoint for every business day in a given time period. • Default - is MonthEnd.
allowEstimates	A flag that indicates if estimated prices are allowed in the result set.

Note: Weekly and monthly price data to be returned is limited only to the last 10 years to customers who have the advanced packages.

The response returns the prices for the specified assets for the specified time period:

XML Sample Response - Getting Prices

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperTimeSeries_1/GetPrices_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
```



```

<s:Body>
  <GetPrices_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperTimeSeries_1">
    <PricesResult>
      <PriceType>
        <LipperId>11006603</LipperId>
        <StartDate>2007-01-27</StartDate>
        <EndDate>2009-03-27</EndDate>
        <PriceList>
          <PriceItem>
            <DataDate>2008-12-31</DataDate>
            <CurrencyCode>USD</CurrencyCode>
            <Nav xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
            <NavEstimated xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
            <Offer xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
            <OfferEstimated xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
            <Bid xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
            <BidEstimated xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
            <Mid>27889.0282176</Mid>
            <MidEstimated>true</MidEstimated>
          </PriceItem>
          <PriceItem>
            <DataDate>2008-10-31</DataDate>
            <CurrencyCode>USD</CurrencyCode>
            <Nav xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
            <NavEstimated xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
            <Offer xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
            <OfferEstimated xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
            <Bid xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
            <BidEstimated xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
            <Mid>27927.544212</Mid>
            <MidEstimated>false</MidEstimated>
          </PriceItem>
          ...
          <PriceItem>
            <DataDate>2007-01-31</DataDate>
            <CurrencyCode>USD</CurrencyCode>
            <Nav xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
            <NavEstimated xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
            <Offer xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
            <OfferEstimated xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
            <Bid xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
            <BidEstimated xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
            <Mid>54769.7762276</Mid>
            <MidEstimated>false</MidEstimated>
          </PriceItem>
        </PriceList>
      </PriceType>
    </PricesResult>
  </GetPrices_Response_1>
</Body>
</Envelope>

```

Element	Description
LipperId	The asset's Lipper ID.
StartDate	The start date for the price data.
EndDate	The end date for the price data.
PriceList	The price list. Contains the following elements: • DataDate - the date for which the price is valid. • CurrencyCode - the currency for the price data. • Nav - the net asset value price, which is the dollar value of a single mutual fund share, based on the value of the underlying assets of the fund minus its liabilities, divided by the number of outstanding shares. • NavEstimated - a flag that indicates if a calculated net asset value price was not supplied by the data provider so that an estimated value was used instead. • Offer - the offer price, which is the net asset value plus initial sales charges. • OfferEstimated - a flag that indicates if a calculated offer value was not supplied by the data provider so that an estimated value was used instead. • Bid - the bid price, which is the net asset value minus redemption charges. • BidEstimated - a flag that indicates if a calculated bid value was not supplied by the data provider so that an estimated value was used instead.



- **Mid** - the mid price of the fund after the subscription period is over. This is the mid point between the bid and the offer.
- **MidEstimated** - a flag that indicates if a calculated mid value was not supplied by the data provider so that an estimated value was used instead.

24.2.6 Get Prices IM (GetPricesIM_1)

The GetPrices_1 method provides an unrestricted version of GetPrices_1 and is available to Investment Management users.

This method is used to get data for a rolling period with a start date and end date. To get a price for a single date, use the GetPrice_1 method.

The example below gets price expressed in US dollars for the asset with '60003333' LipperID including estimated prices:

XML Sample Request - Getting Prices IM

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperTimeSeries/LipperTimeSeries.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperTimeSeries_1/GetPricesIM_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetPricesIM_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperTimeSeries_1">
      <lipperIDs>
        <int>60003333</int>
      </lipperIDs>
      <startDate>2010-06-01T00:00:00</startDate>
      <endDate>2011-07-01T00:00:00</endDate>
      <currencyCode>USD</currencyCode>
      <alignment>MonthEnd</alignment>
      <allowEstimates>true</allowEstimates>
    </GetPricesIM_Request_1>
  </Body>
</Envelope>
```

Parameter	Description
lipperID	A unique eight- or nine-digit number that identifies an asset.
startDate	The start date for the rolling period.
endDate	The end date for the rolling period.
currencyCode	The currency for the returned prices. For full listing of available currency codes, see section Currency Code Enumeration in the Lipper Data Enumerations chapter.
alignment	The alignment of the data in the result set. Can have the following values: • YearEnd - will include a datapoint for every year end in a given time period. • Month End - will include a datapoint for every month end in a given time period. • WeekEnd - will include a datapoint for every week end in a given time period. • Day - will include a datapoint for every business day in a given time period. • Default - is MonthEnd.
allowEstimates	A flag that indicates if estimated prices are allowed in the result set.

Note: Weekly and monthly price data to be returned is limited only to the last 10 years to customers who have the advanced packages.

The response returns the prices for the specified assets for the specified time period:

XML Sample Response - Getting Prices IM

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperTimeSeries_1/GetPricesIM_1_Reply</a:
    Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetPricesIM_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperTimeSeries_1">
      <PricesResult>
        <PriceType>
          <LipperId>11006603</LipperId>
          <StartDate>2007-01-27</StartDate>
          <EndDate>2009-03-27</EndDate>
          <PriceList>
            <PriceItem>
              <DataDate>2008-12-31</DataDate>
              <CurrencyCode>USD</CurrencyCode>
              <Nav xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
              <NavEstimated xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
              <Offer xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
              <OfferEstimated xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
              <Bid xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
              <BidEstimated xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
              <Mid>27889.0282176</Mid>
              <MidEstimated>true</MidEstimated>
            </PriceItem>
            ...
          </PriceList>
        </PriceType>
      </PricesResult>
    </GetPricesIM_Response_1>
  </s:Body>
</Envelope>

```

Element	Description
LipperId	The asset's Lipper ID.
StartDate	The start date for the price data.
EndDate	The end date for the price data.
PriceList	The price list. Contains the following elements: • DataDate - the date for which the price is valid. • CurrencyCode - the currency for the price data. • Nav - the net asset value price, which is the dollar value of a single mutual fund share, based on the value of the underlying assets of the fund minus its liabilities, divided by the number of outstanding shares. • NavEstimated - a flag that indicates if a calculated net asset value price was not supplied by the data provider so that an estimated value was used instead. • Offer - the offer price, which is the net asset value plus initial sales charges. • OfferEstimated - a flag that indicates if a calculated offer value was not supplied by the data provider so that an estimated value was used instead. • Bid - the bid price, which is the net asset value minus redemption charges. • BidEstimated - a flag that indicates if a calculated bid value was not supplied by the data provider so that an estimated value was used instead. • Mid - the mid price of the fund after the subscription period is over. This is the mid point between the bid and the offer. • MidEstimated - a flag that indicates if a calculated mid value was not supplied by the data provider so that an estimated value was used instead.



24.3 Lipper Calculations

The Lipper Calculations section provides easy access to stored and dynamic Lipper performance calculation data from Lipper's extensive database.

24.3.1 Authentication/Authorization, Service Endpoint, and Required Headers

Authorization

All requests to the Lipper services require an authorization token. For details, see section Understanding Authentication Tokens.

Authentication

The Lipper services use Reuters impersonation tokens for each effective user. In this case, Thomson Reuters must create each user before your application authenticates them. Unmanaged effective users are not supported in the Lipper services.

For additional information on creating a Service Token, see section Creating a Token.

Service Endpoint

Lipper Calculations Endpoint

<http://api.rkd.reuters.com/api/LipperCalculations/LipperCalculations.svc>

Required Headers

Lipper Calculations Required HTTP Headers

POST /api/LipperCalculations/LipperCalculations.svc HTTP/1.1
Content-Type: application/soap+xml
Host: api.rkd.reuters.com
Content-Length: [length]

24.3.2 WSDL

Lipper Calculations WSDL:

http://api.rkd.reuters.com/schemas/LipperCalculations/wSDL/LipperCalculations_1_HttpAndRKDTOKEN.wsdl

24.3.3 Get Best Worst Performance (GetBestWorstPerformance_1)

You can use the GetBestWorstPerformance_1 method to retrieve the best and worst performance (date and price) within the last three years for the given asset(s).

The example below gets best and worst performance expressed in Euro for the assets with '19048139', '11020455' and '11006603' LipperIDs:

XML Sample Request - Getting Best Worst Performance

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperCalculations/LipperCalculations.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperCalculations_1/GetBestWorstPerformance_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetBestWorstPerformance_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperCalculations_1">
      <lipperIDs>
        <int>19048139</int>
        <int>11020455</int>
        <int>11006603</int>
      </lipperIDs>
    </GetBestWorstPerformance_Request_1>
  </Body>
</Envelope>
```

```

    </lipperIDs>
    <currencyCode>EUR</currencyCode>
  </GetBestWorstPerformance_Request_1>
</Body>
</Envelope>

```

Parameter	Description
lipperID	A unique eight- or nine-digit number that identifies an asset.
currencyCode	The currency for the returned data. For full listing of available currency codes, see section Currency Code Enumeration in the Lipper Data Enumerations chapter.

The response returns the date and price of the best and worst performance for the specified assets:

XML Sample Response - Getting Best Worst Performance

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperCalculations_1/
    GetBestWorstPerformance_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetBestWorstPerformance_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperCalculations_1">
      <BestWorstPerformanceResult>
        <BestWorstPerformanceType>
          <LipperId>11006603</LipperId>
          <SeriesStartDate>2006-03-31</SeriesStartDate>
          <CurrencyCode>EUR</CurrencyCode>
          <WorstStartDate>2008-08-29</WorstStartDate>
          <WorstValue>-29.86491</WorstValue>
          <WorstEstimate>>false</WorstEstimate>
          <BestStartDate>2006-09-29</BestStartDate>
          <BestValue>8.17069</BestValue>
          <BestEstimate>>false</BestEstimate>
        </BestWorstPerformanceType>
        <BestWorstPerformanceType>
          <LipperId>11020455</LipperId>
          <SeriesStartDate>2006-03-31</SeriesStartDate>
          <CurrencyCode>EUR</CurrencyCode>
          <WorstStartDate>2008-08-29</WorstStartDate>
          <WorstValue>-19.77107</WorstValue>
          <WorstEstimate>>false</WorstEstimate>
          <BestStartDate>2008-12-31</BestStartDate>
          <BestValue>9.7311</BestValue>
          <BestEstimate>>false</BestEstimate>
        </BestWorstPerformanceType>
        <BestWorstPerformanceType>
          <LipperId>19048139</LipperId>
          <SeriesStartDate>2006-03-31</SeriesStartDate>
          <CurrencyCode>EUR</CurrencyCode>
          <WorstStartDate>2008-08-29</WorstStartDate>
          <WorstValue>-12.73273</WorstValue>
          <WorstEstimate>>false</WorstEstimate>
          <BestStartDate>2006-07-31</BestStartDate>
          <BestValue>3.8811</BestValue>
          <BestEstimate>>false</BestEstimate>
        </BestWorstPerformanceType>
      </BestWorstPerformanceResult>
    </GetBestWorstPerformance_Response_1>
  </s:Body>
</Envelope>

```



Element	Description
LipperID	The asset's Lipper ID.
SeriesStartDate	The start date of the time period.
CurrencyCode	The currency for the values.
WorstStartDate	The date of the worst performance date.
WorstValue	The worst performance value (i.e., worst price per share).
WorstEstimate	A flag that indicates if the worst performance value is estimated.
BestStartDate	The date of the best performance date.
BestStartValue	The best performance value (i.e., best price per share).
BestEstimate	A flag that indicates if the best performance value is estimated.

24.3.4 Get Rolling Performance (GetRollingPerformance_1)

You can use the `GetRollingPerformance_1` method to retrieve data for the requested rolling performance calculation for the given asset(s), time period and interval. Rolling performance is a performance calculation for a specific period of time: yearly, daily, weekly, monthly.

The example below gets rolling performance calculation for the specified time period and intervals and expressed in US dollars for the asset with '60003333' LipperID:

XML Sample Request - Getting Rolling Performance

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperCalculations/LipperCalculations.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperCalculations_1/GetRollingPerformance_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetRollingPerformance_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperCalculations_1">
      <lipperID>60003333</lipperID>
      <currencyCode>USD</currencyCode>
      <periods>1</periods>
      <timeFrame>All</timeFrame>
      <interval>Weekly</interval>
      <intervalFrequency>Automatic</intervalFrequency>
    </GetRollingPerformance_Request_1>
  </Body>
</Envelope>
```

Parameter	Description
lipperID	A unique eight- or nine-digit number that identifies an asset.
currencyCode	The currency for the returned data. For full listing of available currency codes, see section Currency Code Enumeration in the Lipper Data Enumerations chapter.
periods	Periods are reference to days, weeks, months, quarters or years.
timeFrame	The time frame for which performance data will be returned (All, Daily, Weekly, Monthly or Yearly).
interval	The rolling period interval, which sets the intervals for the performance data with the given timeFrame.



intervalFrequency	The interval frequency. The possible value could be weekly, monthly, automatic, yearly, semiAnnualy or quarterly. Note: IntervalFrequency tells the service whether you want to perform a calculation using daily, weekly, monthly, quarterly, or yearly samples. It is best to set it to Automatic setting.

The response returns the data for the given rolling performance calculation and asset:

XML Sample Response - Getting Rolling Performance

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperCalculations_1/GetRollingPerformance_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetRollingPerformance_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperCalculations_1">
      <RollingPerformanceResult>
        <RollingPerformanceType>
          <Value>-0.9515</Value>
          <DataDate>2002-12-27</DataDate>
        </RollingPerformanceType>
        <RollingPerformanceType>
          <Value>2.58453</Value>
          <DataDate>2003-03-07</DataDate>
        </RollingPerformanceType>
        <RollingPerformanceType>
          <Value>-3.49702</Value>
          <DataDate>2003-03-14</DataDate>
        </RollingPerformanceType>
        ...
        <RollingPerformanceType>
          <Value>-0.53725</Value>
          <DataDate>2009-04-03</DataDate>
        </RollingPerformanceType>
        <RollingPerformanceType>
          <Value>-0.59132</Value>
          <DataDate>2009-04-10</DataDate>
        </RollingPerformanceType>
      </RollingPerformanceResult>
    </GetRollingPerformance_Response_1>
  </s:Body>
</Envelope>
```

Element	Description
Value	The data value for the period.
DataDate	The date for which the data is valid.

24.3.5 Get Rolling Performance IM (GetRollingPerformanceIM_1)

The GetRollingPerformanceIM_1 method provides an unrestricted version of GetRollingPerformance_1 and is available to Investment Management users.

The example below gets rolling performance calculation for the specified time period and intervals and expressed in US dollars for the asset with '60003333' LipperID:

XML Sample Request - Getting Rolling Performance IM

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
```



```

<To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperCalculations/LipperCalculations.svc</To>
<MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
<Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperCalculations_1/
GetRollingPerformanceIM_1</Action>
<Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
  <ApplicationID>[AppID]</ApplicationID>
  <Token>[service token]</Token>
</Authorization>
</Header>
<Body>
  <GetRollingPerformanceIM_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperCalculations_1">
    <lipperID>60003333</lipperID>
    <currencyCode>USD</currencyCode>
    <periods>1</periods>
    <timeFrame>All</timeFrame>
    <interval>Weekly</interval>
    <intervalFrequency>Automatic</intervalFrequency>
  </GetRollingPerformanceIM_Request_1>
</Body>
</Envelope>

```

Parameter	Description
lipperID	A unique eight- or nine-digit number that identifies an asset.
currencyCode	The currency for the returned data. For full listing of available currency codes, see section Currency Code Enumeration in the Lipper Data Enumerations chapter.
periods	Periods are reference to days, weeks, months, quarters or years.
timeFrame	The time frame for which performance data will be returned (All, Daily, Weekly, Monthly or Yearly).
interval	The rolling period interval, which sets the intervals for the performance data with the given timeFrame.
intervalFrequency	The interval frequency. The possible value could be weekly, monthly, automatic, yearly, semiAnnually or quarterly. Note: IntervalFrequency tells the service whether you want to perform a calculation using daily, weekly, monthly, quarterly, or yearly samples. It is best to set it to Automatic setting.

The response returns the data for the given rolling performance calculation and asset:

XML Sample Response - Getting Rolling Performance IM

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperCalculations_1/
    GetRollingPerformanceIM_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetRollingPerformanceIM_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperCalculations_1">
      <RollingPerformanceResult>
        <RollingPerformanceType>
          <Value>-0.9515</Value>
          <DataDate>2002-12-27</DataDate>
        </RollingPerformanceType>
        <RollingPerformanceType>
          <Value>2.58453</Value>
          <DataDate>2003-03-07</DataDate>
        </RollingPerformanceType>
        <RollingPerformanceType>
          <Value>-3.49702</Value>
          <DataDate>2003-03-14</DataDate>
        </RollingPerformanceType>
        ...
        <RollingPerformanceType>
          <Value>-0.53725</Value>

```



```

    <DataDate>2009-04-03</DataDate>
  </RollingPerformanceType>
  <RollingPerformanceType>
    <Value>-0.59132</Value>
    <DataDate>2009-04-10</DataDate>
  </RollingPerformanceType>
</RollingPerformanceResult>
</GetRollingPerformanceIM_Response_1>
</Body>
</Envelope>

```

Element	Description
Value	The data value for the period.
DataDate	The date for which the data is valid.

24.3.6 Get Stored Performance By Calculations Filter (GetStoredPerformanceByCalculationsFilter_1)

You can use the GetStoredPerformanceByCalculationsFilter_1 method to retrieve a list of performance calculations for a specific fund, currency ID and a list of calculation period type IDs.

Performance calculation is a calculation that measures the percentage change in price from start period to end period.

Note: PerformanceCalculation contains dynamic calculations while StoredPerformanceCalculation methods contain the various performance and statistic calculations.

The example below gets performance calculations expressed in US dollars for the assets with '60003333' LipperIDs based on 'OneMonthPerformanceLastMonthEnd' calculation type:

XML Sample Request - Getting Stored Performance By Calculations Filter

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperCalculations/LipperCalculations.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperCalculations_1/GetStoredPerformanceByCalculationsFilter_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetStoredPerformanceByCalculationsFilter_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperCalculations_1">
      <lipperID>60003333</lipperID>
      <currencyCode>USD</currencyCode>
      <calcPeriodTypeIDs>
        <CalculationTypeId>OneMonthPerformanceLastMonthEnd</CalculationTypeId>
      </calcPeriodTypeIDs>
    </GetStoredPerformanceByCalculationsFilter_Request_1>
  </Body>
</Envelope>

```

Parameter	Description
lipperID	A unique eight- or nine-digit number that identifies an asset.
currencyCode	The currency for the returned data. For full listing of available currency codes, see section Currency Code Enumeration in the Lipper Data Enumerations chapter.
calcPeriodTypeIDs	The list of calculation period type IDs. For full listing of available calculation typeIDs, see section Calculation TypeId Enumeration in the Lipper Data Enumerations chapter.



The response returns a list of performance calculations the specified asset:

XML Sample Response - Getting Stored Performance By Calculations Filter

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperCalculations_1/
    GetStoredPerformanceByCalculationsFilter_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetStoredPerformanceByCalculationsFilter_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/
    LipperCalculations_1">
      <StoredPerformanceByCalculationsFilterResult>
        <PerformanceCalculationType>
          <LipperId>60003333</LipperId>
          <PerformanceCalculationList>
            <PerformanceCalculationItem>
              <CurrencyCode>USD</CurrencyCode>
              <StatTypeId>26594</StatTypeId>
              <Estimate>false</Estimate>
              <StartDate>2009-02-28</StartDate>
              <EndDate>2009-03-31</EndDate>
              <CalcPeriodName>OneMonthPerformancetoLastMonthEnd</CalcPeriodName>
              <Language>LanguageNeutral</Language>
              <Value>10.24352</Value>
              <CalculationType>OneMonthPerformancetoLastMonthEnd</CalculationType>
            </PerformanceCalculationItem>
          </PerformanceCalculationList>
        </PerformanceCalculationType>
      </StoredPerformanceByCalculationsFilterResult>
    </GetStoredPerformanceByCalculationsFilter_Response_1>
  </s:Body>
</Envelope>
```

Element	Description
LipperId	The asset's Lipper ID.
PerformanceCalculationList	The asset's performance calculation list. Contains the following elements: • CurrencyCode - the currency code that represents the currency of the performance calculation data. • StatTypeId - the stat type id. This is a simple numeric reference identifier used to identify the various statistics and calculations available through the service. • Estimate - a flag that indicates if the value of this performance calculation is an estimate. • StartDate - the start date for the time period used for the performance calculation. • EndDate - the end date for the time period used for the performance calculation. • CalcPeriodName - the name of the performance calculation.

24.3.7 Get Stored Performance Calculation (GetStoredPerformanceCalculation_1)

You can use the GetStoredPerformanceCalculation_1 method to retrieve the value of the requested stored performance calculation for the given asset(s).

PerformanceCalculation contains dynamic calculations while StoredPerformanceCalculation methods contain the various performance and statistic calculations.

The example below gets performance calculations expressed in US dollars for the assets with '60003333' LipperIDs based on 'OneMonthPerformanceLastMonthEnd' calculation type:

XML Sample Request - Getting Stored Performance Calculation



```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperCalculations/LipperCalculations.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperCalculations_1/
    GetStoredPerformanceCalculation_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetStoredPerformanceCalculation_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperCalculations_1">
      <lipperIDs>
        <int>60003333</int>
      </lipperIDs>
      <currencyCode>USD</currencyCode>
      <calcPeriodTypeID>OneMonthPerformanceToLastMonthEnd</calcPeriodTypeID>
      <language>English</language>
    </GetStoredPerformanceCalculation_Request_1>
  </Body>
</Envelope>

```

Parameter	Description
lipperID	A unique eight- or nine-digit number that identifies an asset.
currencyCode	The currency for the returned data. For full listing of available currency codes, see section Currency Code Enumeration in the Lipper Data Enumerations chapter.
calcPeriodTypeID	The list of calculation period type IDs. For full listing of available calculation typeIDs, see section Calculation TypeID Enumeration in the Lipper Data Enumerations chapter.
language	The display language for the returned data.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

The response returns requested stored performance calculation data for the specified asset:

XML Sample Response - Getting Stored Performance Calculation

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperCalculations_1/
    GetStoredPerformanceCalculation_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetStoredPerformanceCalculation_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperCalculations_1">
      <StoredPerformanceCalculationResult>
        <PerformanceCalculationType>
          <LipperId>60003333</LipperId>
          <PerformanceCalculationList>
            <PerformanceCalculationItem>
              <CurrencyCode>USD</CurrencyCode>
              <StatTypeId>4</StatTypeId>
              <Estimate>false</Estimate>
              <StartDate>2009-02-28</StartDate>
              <EndDate>2009-03-31</EndDate>
              <CalcPeriodName>1 Month Performance to Last Month End</CalcPeriodName>
              <Language>English</Language>
              <Value>10.24352</Value>
              <CalculationType>None</CalculationType>
            </PerformanceCalculationItem>

```




```

    </PerformanceCalculationList>
    </PerformanceCalculationType>
    </StoredPerformanceCalculationResult>
  </GetStoredPerformanceCalculation_Response_1>

</Body>
</Envelope>

```

Element	Description
LipperId	The asset's Lipper ID.
PerformanceCalculationList	The asset's performance calculation list. Contains the following elements: • CurrencyCode - the currency code that represents the currency of the performance calculation data. • StartTypeId - the stat type id. • Estimate - a flag that indicates if the value of this performance calculation is an estimate. • StartDate - the start date for the time period used for the performance calculation. • EndDate - the end date for the time period used for the performance calculation. • CalcPeriodName - the name of the performance calculation. • Language - the display language for the performance calculation data. • Value - the value of the performance calculation. • CalculationType - the type of the calculation.

24.3.8 Get Stored Performance Calculations (GetStoredPerformanceCalculations_1)

You can use the GetStoredPerformanceCalculations_1 method to retrieve all of the available performance calculations and values for the given asset(s).

PerformanceCalculation contains dynamic calculations while StoredPerformanceCalculation methods contain the various performance and statistic calculations.

The example below gets performance calculations expressed in Euro and displayed in English language for the given assets:

XML Sample Request - Getting Stored Performance Calculations

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperCalculations/LipperCalculations.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperCalculations_1/GetStoredPerformanceCalculations_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetStoredPerformanceCalculations_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperCalculations_1">
      <lipperIDs>
        <int>65028707</int>
        <int>19005018</int>
        <int>19008018</int>
        <int>19005027</int>
        <int>19008027</int>
        <int>19005028</int>
        <int>19008028</int>
        <int>19005026</int>
        <int>19005024</int>
        <int>19005003</int>
        <int>19008003</int>
        <int>60087648</int>
        <int>60079650</int>
        <int>11029714</int>
        <int>11029717</int>
        <int>11027921</int>
        <int>11027924</int>
        <int>11000423</int>
        <int>19048072</int>
        <int>19048155</int>
      </lipperIDs>
    </GetStoredPerformanceCalculations_Request_1>
  </Body>
</Envelope>

```



```

<int>19048217</int>
<int>19048136</int>
<int>19048138</int>
<int>19048139</int>
<int>11020455</int>
<int>11006603</int>
</lipperIDs>
<currencyCode>EUR</currencyCode>
<language>English</language>
</GetStoredPerformanceCalculations_Request_1>
</Body>
</Envelope>

```

Parameter	Description
lipperID	A unique eight- or nine-digit number that identifies an asset.
currencyCode	The currency for the returned data. For full listing of available currency codes, see section Currency Code Enumeration in the Lipper Data Enumerations chapter.
language	The display language for the returned data.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

The response returns requested stored performance calculation data for the specified assets:

XML Sample Response - Getting Stored Performance Calculations

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperCalculations_1/
    GetStoredPerformanceCalculations_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetStoredPerformanceCalculations_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperCalculations_1">
      <StoredPerformanceCalculationsResult>
        <PerformanceCalculationType>
          <LipperId>60079650</LipperId>
          <PerformanceCalculationList>
            <PerformanceCalculationItem>
              <CurrencyCode>EUR</CurrencyCode>
              <StatTypeId>4</StatTypeId>
              <Estimate>true</Estimate>
              <StartDate>2009-02-28</StartDate>
              <EndDate>2009-03-31</EndDate>
              <CalcPeriodName>1 Month Performance to Last Month End</CalcPeriodName>
              <Language>English</Language>
              <Value>0.04256</Value>
              <CalculationType>None</CalculationType>
            </PerformanceCalculationItem>
            <PerformanceCalculationItem>
              <CurrencyCode>EUR</CurrencyCode>
              <StatTypeId>5</StatTypeId>
              <Estimate>true</Estimate>
              <StartDate>2008-12-31</StartDate>
              <EndDate>2009-03-31</EndDate>
              <CalcPeriodName>3 Month Performance to Last Month End</CalcPeriodName>
              <Language>English</Language>
              <Value>-2.59882</Value>
              <CalculationType>None</CalculationType>
            </PerformanceCalculationItem>
            ...
            <PerformanceCalculationItem>
              <CurrencyCode>EUR</CurrencyCode>

```



```

        <StatTypeId>55</StatTypeId>
        <Estimate>false</Estimate>
        <StartDate>1999-03-31</StartDate>
        <EndDate>2009-03-31</EndDate>
        <CalcPeriodName>Max Drawdown for 10 Years to Last Month End</CalcPeriodName>
        <Language>English</Language>
        <Value>-66.96854</Value>
        <CalculationType>None</CalculationType>
      </PerformanceCalculationItem>
    </PerformanceCalculationList>
  </PerformanceCalculationType>
</StoredPerformanceCalculationsResult>
</GetStoredPerformanceCalculations_Response_1>
</Body>
</Envelope>

```

Element	Description
LipperId	The asset's Lipper ID.
PerformanceCalculationList	The asset's performance calculation list. Contains the following elements: • CurrencyCode - the currency code that represents the currency of the performance calculation data. • StatTypeId - the stat type id. • Estimate - a flag that indicates if the value of this performance calculation is an estimate. • StartDate - the start date for the time period used for the performance calculation. • EndDate - the end date for the time period used for the performance calculation. • CalcPeriodName - the name of the performance calculation. • Language - the display language for the performance calculation data. • Value - the value of the performance calculation. • CalculationType - the type of the calculation.

24.4 Lipper Fundamentals

The Lipper Details section provides easy access to a wide range of basic Lipper fund data from Lipper's extensive database of collective investments, allowing clients to quickly find fund details based on hundreds of criteria items and to compare those funds across a wide range of timely characteristics.

24.4.1 Authentication/Authorization, Service Endpoint, and Required Headers

Authorization

All requests to the Lipper services require an authorization token. For details, see section Understanding Authentication Tokens.

Authentication

The Lipper services use Reuters impersonation tokens for each effective user. In this case, Thomson Reuters must create each user before your application authenticates them. Unmanaged effective users are not supported in the Lipper services.

For additional information on creating a Service Token, see section Creating a Token.

Service Endpoints

Lipper Fundamentals Endpoint

<http://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc>

Required Headers

Lipper Fundamentals Required HTTP Headers

POST /api/LipperFundamentals/LipperFundamentals.svc HTTP/1.1
 Content-Type: application/soap+xml
 Host: api.rkd.reuters.com
 Content-Length: [length]



24.4.2 WSDL

Lipper Fundamentals WSDL:

http://api.rkd.reuters.com/schemas/LipperFundamentals/wSDL/LipperFundamentals_1_HttpAndRKDToken.wsdl

24.4.3 Get Asset Dates Advanced (GetAssetDatesAdvanced_1)

You can use the GetAssetIsPrimary_1 method to retrieve flags that indicate whether the given assets are the primary funds for a fund series with multiple share classes for the same portfolio of investments.

A flag represents an attribute that Lipper has assigned to the asset.

The example below gets flags for the asset with '60003333' and '60003331' LipperIDs:

XML Sample Request - Getting Asset Dates Advanced

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetAssetDatesAdvanced_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetAssetDatesAdvanced_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <lipperIDs>
        <int>40085510</int>
        <int>60011162</int>
        <int>60035050</int>
      </lipperIDs>
      <assetDateTypesFilter>
        <AssetDateTypeId>DeadDate</AssetDateTypeId>
        <AssetDateTypeId>QualifiedHistoryDate</AssetDateTypeId>
      </assetDateTypesFilter>
    </GetAssetDatesAdvanced_Request_1>
  </Body>
</Envelope>
```

Parameter	Description
AssetDateTypeId	This parameter has the following attributes: • DeadDate - The date when the fund was closed (liquidated or merged). • QualifiedHistoryDate - The date at which the fund had a fundamental change in objective or strategy that makes the performance data prior to this date irrelevant to the current peer group.
lipperID	Contains a list of one or more Lipper IDs for which data will be returned. A Lipper ID is a unique eight- or nine-digit number (e.g., 60003333) that identifies an asset.

The response returns the following information for the specified assets:

XML Sample Response - Getting Asset Dates Advanced

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetAssetDatesAdvanced_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
  </s:Header>
  <s:Body>
    <GetAssetDatesAdvanced_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <assetDateTypesFilter>
        <AssetDateTypeId>DeadDate</AssetDateTypeId>
        <AssetDateTypeId>QualifiedHistoryDate</AssetDateTypeId>
      </assetDateTypesFilter>
      <assetData>
        <assetDataItem>
          <lipperID>40085510</lipperID>
          <DeadDate>2009-04-17T10:41:48.639875Z</DeadDate>
          <QualifiedHistoryDate>2009-04-17T10:41:48.639875Z</QualifiedHistoryDate>
        </assetDataItem>
        <assetDataItem>
          <lipperID>60011162</lipperID>
          <DeadDate>2009-04-17T10:41:48.639875Z</DeadDate>
          <QualifiedHistoryDate>2009-04-17T10:41:48.639875Z</QualifiedHistoryDate>
        </assetDataItem>
        <assetDataItem>
          <lipperID>60035050</lipperID>
          <DeadDate>2009-04-17T10:41:48.639875Z</DeadDate>
          <QualifiedHistoryDate>2009-04-17T10:41:48.639875Z</QualifiedHistoryDate>
        </assetDataItem>
      </assetData>
    </GetAssetDatesAdvanced_Response_1>
  </s:Body>
</s:Envelope>
```



```

</CacheResponse>
<a:RelatesTo>[MessageID]</a:RelatesTo>
</s:Header>
<s:Body>
  <GetAssetDatesAdvanced_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
    <AssetDatesResult>
      <AssetDateType>
        <LipperId>40085510</LipperId>
        <AssetDateList>
          <AssetDateItem>
            <DataDate>2006-05-15</DataDate>
            <DateType>DeadDate</DateType>
          </AssetDateItem>
        </AssetDateList>
      </AssetDateType>
      <AssetDateType>
        <LipperId>60011162</LipperId>
        <AssetDateList>
          <AssetDateItem>
            <DataDate>2004-09-06</DataDate>
            <DateType>QualifiedHistoryDate</DateType>
          </AssetDateItem>
        </AssetDateList>
      </AssetDateType>
      <AssetDateType>
        <LipperId>60035050</LipperId>
        <AssetDateList>
          <AssetDateItem>
            <DataDate>2003-08-06</DataDate>
            <DateType>DeadDate</DateType>
          </AssetDateItem>
        </AssetDateList>
      </AssetDateType>
    </AssetDatesResult>
  </GetAssetDatesAdvanced_Response_1>
</Body>
</Envelope>

```

Element	Description
DataDate	Reporting Data is as on this date.
DateType	Possible values are: • DeadDate - The date when the fund was closed (liquidated or merged). • QualifiedHistoryDate - The date at which the fund had a fundamental change in objective or strategy that makes the performance data prior to this date irrelevant to the current peer group.
LipperId	The asset's Lipper ID.
IsValid	A flag that indicates whether this instance is true or false.

24.4.4 Get Asset Dates IM (GetAssetDatesIM_1)

You can use the GetAssetIsPrimary_1 method to retrieve flags that indicate whether the given assets are the primary funds for a fund series with multiple share classes for the same portfolio of investments.

The GetAssetDatesIM_1 method provides an unrestricted version of GetAssetDatesAdvanced_1 and is available to Investment Management users.

The example below gets flags for the asset with '60003333' and '60003331' LipperIDs:

XML Sample Request - Getting Asset Dates IM

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetAssetDatesIM_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">

```



```

    <ApplicationID>[AppID]</ApplicationID>
    <Token>[service token]</Token>
  </Authorization>
</Header>
<Body>
  <GetAssetDatesIM_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
    <lipperIDs>
      <int>40085510</int>
      <int>60011162</int>
      <int>60035050</int>
    </lipperIDs>
    <assetDateTypesFilter>
      <AssetDateTypeId>DeadDate</AssetDateTypeId>
      <AssetDateTypeId>QualifiedHistoryDate</AssetDateTypeId>
    </assetDateTypesFilter>
  </GetAssetDatesIM_Request_1>
</Body>
</Envelope>

```

Parameter	Description
AssetDateTypeId	This parameter has the following attributes: • DeadDate - The date when the fund was closed (liquidated or merged). • QualifiedHistoryDate - The date at which the fund had a fundamental change in objective or strategy that makes the performance data prior to this date irrelevant to the current peer group. • LaunchDate - The fund's launch date, which is the date when the subscription period for the fund ends. • IPODate - The date of the fund's Initial Public Offerings. • MaturityDate - End of fund (if set up for particular time). • ValidHistoryDate - Used when there is incomplete price history or suspect price history.
lipperID	Contains a list of one or more Lipper IDs for which data will be returned. A Lipper ID is a unique eight- or nine-digit number (e.g., 60003333) that identifies an asset.

The response returns the following information for the specified assets:

XML Sample Response - Getting Asset Dates IM

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetAssetDatesIM_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetAssetDatesIM_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <AssetDatesResult>
        <AssetDateType>
          <LipperId>40085510</LipperId>
          <AssetDateList>
            <AssetDateItem>
              <DataDate>2006-05-15</DataDate>
              <DateType>DeadDate</DateType>
            </AssetDateItem>
          </AssetDateList>
        </AssetDateType>
        <AssetDateType>
          <LipperId>60011162</LipperId>
          <AssetDateList>
            <AssetDateItem>
              <DataDate>2004-09-06</DataDate>
              <DateType>QualifiedHistoryDate</DateType>
            </AssetDateItem>
          </AssetDateList>
        </AssetDateType>
      </AssetDatesResult>
    </GetAssetDatesIM_Response_1>
  </s:Body>
</s:Envelope>

```



```

    <AssetDateType>
      <LipperId>60035050</LipperId>
      <AssetDateList>
        <AssetDateItem>
          <DataDate>2003-08-06</DataDate>
          <DateType>DeadDate</DateType>
        </AssetDateItem>
      </AssetDateList>
    </AssetDateType>
  </AssetDatesResult>
</GetAssetDatesIM_Response_1>
</Body>
</Envelope>

```

Element	Description
DataDate	Reporting Data is as on this date.
DateType	Possible values are: • DeadDate - The date when the fund was closed (liquidated or merged). • QualifiedHistoryDate - The date at which the fund had a fundamental change in objective or strategy that makes the performance data prior to this date irrelevant to the current peer group. • LaunchDate -The fund's launch date, which is the date when the subscription period for the fund ends. • IPODate - The date of the fund's Initial Public Offerings. • MaturityDate - End of fund (if set up for particular time). • ValidHistoryDate - Used when there is incomplete price history or suspect price history.
LipperId	The asset's Lipper ID.
IsValid	A flag that indicates whether this instance is true or false.

24.4.5 Get Asset Is Primary (GetAssetIsPrimary_1)

You can use the GetAssetIsPrimary_1 method to retrieve flags that indicate whether the given assets are the primary funds for a fund series with multiple share classes for the same portfolio of investments.

A flag represents an attribute that Lipper has assigned to the asset.

The example below gets flags for the asset with '60003333' and '60003331' LipperIDs:

XML Sample Request - Getting Asset Is Primary

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetAssetIsPrimary_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetAssetIsPrimary_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <lipperIDs>
        <int>60003333</int>
        <int>60003331</int>
      </lipperIDs>
    </GetAssetIsPrimary_Request_1>
  </Body>
</Envelope>

```

Parameter	Description
lipperID	Contains a list of one or more Lipper IDs for which data will be returned. A Lipper ID is a unique eight- or nine-



digit number (e.g., 60003333) that identifies an asset.

The response returns the following information for the specified assets:

XML Sample Response - Getting Asset Is Primary

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/
    GetAssetIsPrimary_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetAssetIsPrimary_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <AssetIsPrimaryResult>
        <ValidationType>
          <LipperId>60003331</LipperId>
          <IsValid>false</IsValid>
        </ValidationType>
        <ValidationType>
          <LipperId>60003333</LipperId>
          <IsValid>false</IsValid>
        </ValidationType>
      </AssetIsPrimaryResult>
    </GetAssetIsPrimary_Response_1>
  </Body>
</Envelope>
```

Element	Description
LipperId	The asset's Lipper ID.
IsValid	A flag that indicates whether this instance is true or false.

24.4.6 Get Asset Japanese Name (GetAssetJapaneseName_1)

You can use the GetAssetJapaneseName_1 method to retrieve the name of the asset in Japanese.

The example below gets Japanese name of the asset with '65025505' and '60003471' LipperIDs:

XML Sample Request - Getting Asset Japanese Name

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/
    LipperFundamentals_1/GetAssetJapaneseName_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GGetAssetJapaneseName_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <lipperIDs>
        <int>65025505</int>
        <int>60003471</int>
      </lipperIDs>
    </GGetAssetJapaneseName_Request_1>
  </Body>
</Envelope>
```



Parameter	Description
lipperID	Contains a list of one or more Lipper IDs for which data will be returned. A Lipper ID is a unique eight- or nine-digit number (e.g., 60003333) that identifies an asset.

The response returns the following information for the specified assets:

XML Sample Response - Getting Asset Japanese Name

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/
    GetAssetJapaneseName_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetAssetJapaneseName_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance">
      <AssetJapaneseNameResult>
        <AssetJapaneseNameType>
          <LipperId>60003471</LipperId>
          <AssetKatakanaName>JPM Global Bond EUR B Acc EUR</AssetKatakanaName>
          <AssetNickname></AssetNickname>
        </AssetJapaneseNameType>
        <AssetJapaneseNameType>
          <LipperId>65025505</LipperId>
          <AssetKatakanaName>スーパーフント・ジヤハ C200603USD</AssetKatakanaName>
          <AssetNickname></AssetNickname>
        </AssetJapaneseNameType>
      </AssetJapaneseNameResult>
    </GetAssetJapaneseName_Response_1>
  </s:Body>
</Envelope>
```

Element	Description
LipperId	The asset's Lipper ID.
AssetKatakanaName	The asset's full name in Katakana, which is the form of Japanese syllabic writing used especially for scientific terms, official document, and words adopted from other countries.
AssetNickname	The asset's nickname in Katakana.

24.4.7 Get Asset Style Matrix (GetAssetStyleMatrix_1)

You can use the GetAssetsPrimary_1 method to retrieve asset's style matrix.

The example below gets style matrices for the assets with '40045581' and '40081587' LipperIDs:

XML Sample Request - Getting Asset Style Matrix

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/
    LipperFundamentals_1/GetAssetStyleMatrix_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
```



```

    <ApplicationID>[AppID]</ApplicationID>
    <Token>[service token]</Token>
  </Authorization>
</Header>
<Body>
  <GetAssetStyleMatrix_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
    <lipperIDs>
      <int>40045581</int>
      <int>40081587</int>
    </lipperIDs>
  </GetAssetStyleMatrix_Request_1>
</Body>
</Envelope>

```

Parameter	Description
lipperID	Contains a list of one or more Lipper IDs for which data will be returned. A Lipper ID is a unique eight- or nine-digit number (e.g., 60003333) that identifies an asset.

The response returns the following information for the specified assets:

XML Sample Response - Getting Asset Style Matrix

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetAssetStyleMatrix_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetAssetStyleMatrix_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <AssetStyleMatrixResult>
        <AssetStyleMatrixType>
          <LipperId>40045581</LipperId>
          <AssetStyleMatrix>LargeCapValue</AssetStyleMatrix>
        </AssetStyleMatrixType>
        <AssetStyleMatrixType>
          <LipperId>40081587</LipperId>
          <AssetStyleMatrix>MultiCapValue</AssetStyleMatrix>
        </AssetStyleMatrixType>
      </AssetStyleMatrixResult>
    </GetAssetStyleMatrix_Response_1>
  </Body>
</Envelope>

```

Element	Description
LipperId	The asset's Lipper ID.
AssetStyleMatrix	An enumeration that represents types of fee. Possible values are: None, LargeCapCore, LargeCapGrowth, LargeCapValue, MidCapCore, MidCapGrowth, MidCapValue, MultiCapCore, MultiCapGrowth, MultiCapValue, SmallCapCore, SmallCapGrowth, SmallCapValue.

24.4.8 Get Attributes (GetAttributes_1)

You can use the GetAttributes_1 method to retrieve all of the available attribute information for the given asset(s). An attribute provides basic information about the asset and available attributes include asset type, asset status, asset universe, EU Tax Directive Status, Fund Type (US), Geographical Focus, Legal Structure, Model Portfolio Rebalancing, Total Expense Ratio Supplier, and Valuation/Price Frequency.

The example below gets attribute information for the asset with '60003333' and '60003331' LipperIDs:



XML Sample Request - Getting Attributes

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetAttributes_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetAttributes_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <lipperIDs>
        <int>60003333</int>
        <int>60003331</int>
      </lipperIDs>
      <language>LanguageNeutral</language>
    </GetAttributes_Request_1>
  </Body>
</Envelope>

```

Parameter	Description
LipperId	Contains a list of one or more Lipper IDs for which data will be returned. A Lipper ID is a unique eight- or nine-digit number (e.g., 60003333) that identifies an asset.
language	The language ID that represents the display language for the returned list.

The response returns the following information for the specified assets:

XML Sample Response - Getting Attributes

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetAttributes_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetAttributes_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
      <AttributesResult>
        <AttributeType>
          <LipperId>60003471</LipperId>
          <AttributeList>
            <AttributeItem>
              <Language>English</Language>
              <ValueId>1034</ValueId>
              <ValueName>Asset Type</ValueName>
              <ValueCode>BOND</ValueCode>
              <Value>Bond</Value>
            </AttributeItem>
            ...
          </AttributeList>
        </AttributeType>
        <AttributeType>
          <LipperId>60003619</LipperId>
          <AttributeList>
            ...
          </AttributeList>
        </AttributeType>
      </AttributesResult>
    </GetAttributes_Response_1>
  </s:Body>
</s:Envelope>

```



```

    <AttributeType>
      <LipperId>65025505</LipperId>
      <AttributeList>
        <AttributeItem>
          <Language>English</Language>
          <ValueId>1034</ValueId>
          <ValueName>Asset Type</ValueName>
          <ValueCode>OTHER</ValueCode>
          <Value>Other</Value>
        </AttributeItem>
        ....
      </AttributeList>
    </AttributeType>
  </AttributesResult>
</GetAttributes_Response_1>
</Body>
</Envelope>

```

Element	Description
LipperId	The asset's Lipper ID.
AttributeList	The asset's attribute list that includes all of the asset's available attributes and associated values. Contains the following values: • Language - the display language for the attribute information. • ValueId - the numeric attribute value ID. • ValueName - the value name. • ValueCode - the alphabetic attribute value code. • Value - the attribute value.

24.4.9 Get Attributes Advanced (GetAttributesAdvanced_1)

You can use the GetAttributesAdvanced_1 method to retrieve all of the available attribute information for the given asset(s). An attribute provides information about the asset and available attributes include asset type, asset status, asset universe, EU Tax Directive Status, Fund Type (US), Geographical Focus, Legal Structure, Model Portfolio Rebalancing, Total Expense Ratio Supplier, and Valuation/Price Frequency.

The example below gets attribute information for the specified assets:

XML Sample Request - Getting Attributes Advanced

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetAttributesAdvanced_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetAttributesAdvanced_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <lipperIDs>
        <int>60003332</int>
        <int>65028707</int>
        <int>60003333</int>
        <int>40085510</int>
      </lipperIDs>
      <language>Japanese</language>
    </GetAttributesAdvanced_Request_1>
  </Body>
</Envelope>

```

Parameter	Description



LipperId	Contains a list of one or more Lipper IDs for which data will be returned. A Lipper ID is a unique eight- or nine-digit number (e.g., 60003333) that identifies an asset.
language	The language ID that represents the display language for the returned list.

The response returns the following information for the specified assets:

XML Sample Response - Getting Attributes Advanced

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/
    GetAttributesAdvanced_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetAttributesAdvanced_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance">
      <AttributesResult>
        <AttributeType>
          <LipperId>40085510</LipperId>
          <AttributeList>
            </AttributeList>
          </AttributeType>
        <AttributeType>
          <LipperId>60003332</LipperId>
          <AttributeList>
            <AttributeItem>
              <Language>Japanese</Language>
              <ValueId>14627</ValueId>
              <ValueName>Austrian Registration Status</ValueName>
              <ValueCode>BUNDZUG</ValueCode>
              <Value>Bluetenweiss / Zugelassen</Value>
            </AttributeItem>
          </AttributeList>
        </AttributeType>
        <AttributeType>
          <LipperId>60003333</LipperId>
          <AttributeList>
            <AttributeItem>
              <Language>Japanese</Language>
              <ValueId>14627</ValueId>
              <ValueName>Austrian Registration Status</ValueName>
              <ValueCode>BUNDZUG</ValueCode>
              <Value>Bluetenweiss / Zugelassen</Value>
            </AttributeItem>
          </AttributeList>
        </AttributeType>
        <AttributeType>
          <LipperId>65028707</LipperId>
          <AttributeList>
            </AttributeList>
          </AttributeType>
      </AttributesResult>
    </GetAttributesAdvanced_Response_1>
  </s:Body>
</Envelope>
```

Element	Description
LipperId	The asset's Lipper ID.
AttributeList	The asset's attribute list that includes all of the asset's available attributes and associated values. Contains the following values: • Language - the display language for the attribute information. • ValueId - the numeric attribute value ID.



- **ValueName** - the value name.
- **ValueCode** - the alphabetic attribute value code.
- **Value** - the attribute value.

24.4.10 Get Attributes Basic (GetAttributesBasic_1)

You can use the GetAttributesBasic_1 method to retrieve basic attribute information for the given asset(s). An attribute provides basic information about the asset and available attributes include asset type, asset status, asset universe, EU Tax Directive Status, Fund Type (US), Geographical Focus, Legal Structure, Model Portfolio Rebalancing, Total Expense Ratio Supplier, and Valuation/Price Frequency.

The example below gets attributes information for the specified assets:

XML Sample Request - Getting Attributes Basic

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetAttributesBasic_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetAttributesBasic_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <lipperIDs>
        <int>60003332</int>
        <int>65028707</int>
        <int>60003333</int>
        <int>40085510</int>
      </lipperIDs>
      <language>Japanese</language>
    </GetAttributesBasic_Request_1>
  </Body>
</Envelope>
```

Parameter	Description
LipperId	Contains a list of one or more Lipper IDs for which data will be returned. A Lipper ID is a unique eight- or nine-digit number (e.g., 60003333) that identifies an asset.
language	The language ID that represents the display language for the returned list.

The response returns the following information for the specified assets:

XML Sample Response - Getting Attributes Basic

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetAttributesBasic_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetAttributesBasic_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
      <AttributesResult>
        <AttributeType>
```



```

    <LipperId>40085510</LipperId>
    <AttributeList>
      <AttributeItem>
        <Language>Japanese</Language>
        <ValueId>5429</ValueId>
        <ValueName>???? ??? (??)</ValueName>
        <ValueCode>VARIABLE</ValueCode>
        <Value>?????</Value>
      </AttributeItem>
    </AttributeList>
  </AttributeType>
  ...
  <AttributeType>
    <LipperId>60003333</LipperId>
    <AttributeList>
      <AttributeItem>
        <Language>Japanese</Language>
        <ValueId>14627</ValueId>
        <ValueName>Austrian Registration Status</ValueName>
        <ValueCode>BUNDZUG</ValueCode>
        <Value>Bluetenweiss / Zugelassen</Value>
      </AttributeItem>
    </AttributeList>
  </AttributeType>
  ...
</AttributesResult>
</GetAttributesBasic_Response_1>
</Body>
</Envelope>

```

Element	Description
LipperId	The asset's Lipper ID.
AttributeList	The asset's attribute list that includes all of the asset's available attributes and associated values. Contains the following values: • Language - the display language for the attribute information. • ValueId - the numeric attribute value ID. • ValueName - the value name. • ValueCode - the alphabetic attribute value code. • Value - the attribute value.

24.4.11 Get Benchmark (GetBenchmark_1)

You can use the GetBenchmark_1 method to retrieve the benchmarks for the given benchmark category and asset(s).

A benchmark is a standard against which the performance of a security, index or investor can be measured.

The example below gets benchmarks for the asset with '60003333' LipperID under the 'AssetManager' category and displayed in English language:

XML Sample Request - Getting Benchmark

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetBenchmark_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetBenchmark_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <lipperIDs>
        <int>60003333</int>
      </lipperIDs>
    </GetBenchmark_Request_1>
  </Body>
</Envelope>

```



```

    <benchmarkCategory>AssetManager</benchmarkCategory>
    <language>English</language>
    </GetBenchmark_Request_1>

</Body>
</Envelope>

```

Parameter	Description
lipperID	A Lipper ID is a unique eight- or nine-digit number (e.g., 60003333) that identifies a collective investment.
benchmarkCategory	The benchmark category for which benchmarks should be returned. Possible values are: • AssetManager - a benchmark that defines the asset manager (the same as fund manager). • RiskFreeIndex - risk free index is a benchmark comprised of 'riskless' assets such as three month Treasury Bills. • TechnicalIndicator - technical indicator is a benchmark that, based on statistical calculations, makes a very good benchmark for the asset. • PriceEstimation - a benchmark that defines price estimates. • Classification - a benchmark that defines asset classification.
language	The display language for the returned data.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

The response returns a list of <BenchmarkType> elements that contain the benchmarks for the requested benchmark category data for the given asset(s):

XML Sample Response - Getting Benchmark

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetBenchmark_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    GetBenchmark_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <BenchmarkResult>
        <BenchmarkType>
          <LipperId>60003333</LipperId>
          <BenchmarkList>
            <BenchmarkItem>
              <Language>English</Language>
              <BenchmarkId>11005483</BenchmarkId>
              <BenchmarkName>MSCI World/Health Care TR</BenchmarkName>
              <BenchmarkCategory>AssetManager</BenchmarkCategory>
            </BenchmarkItem>
          </BenchmarkList>
        </BenchmarkType>
      </BenchmarkResult>
    </GetBenchmark_Response_1>
  </s:Body>
</Envelope>

```

Element	Description
LipperId	The asset's Lipper ID.
BenchmarkList	The list of BenchmarkItems that contain the asset's list of benchmarks. Contains the following elements: • Language - the language for the benchmark information. • BenchmarkId - the Benchmark ID. • BenchmarkName - the name of the benchmark. • BenchmarkCategory - the benchmark category.



24.4.12 Get Benchmarks (GetBenchmarks_1)

You can use the GetBenchmarks_1 method to retrieve benchmarks for the given asset(s).

A benchmark is a standard against which the performance of a security, index or investor can be measured.

The example below gets benchmarks for the asset with '60003333' LipperID displayed in English language:

XML Sample Request - Getting Benchmarks

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetBenchmarks_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetBenchmarks_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <lipperIDs>
        <int>60003333</int>
      </lipperIDs>
      <language>English</language>
    </GetBenchmarks_Request_1>
  </Body>
</Envelope>
```

Parameter	Description
lipperID	A unique eight- or nine-digit number that identifies an asset.
language	The display language for the returned data.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

The response returns a list of <BenchmarkType> elements that contain the benchmark information:

XML Sample Response - Getting Benchmarks

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetBenchmarks_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetBenchmarks_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <BenchmarksResult>
        <BenchmarkType>
          <LipperId>60003333</LipperId>
          <BenchmarkList>
            <BenchmarkItem>
              <Language>English</Language>
              <BenchmarkId>11005483</BenchmarkId>
              <BenchmarkName>MSCI World/Health Care TR</BenchmarkName>
              <BenchmarkCategory>AssetManager</BenchmarkCategory>
            </BenchmarkItem>
          </BenchmarkList>
        </BenchmarkType>
      </BenchmarksResult>
    </GetBenchmarks_Response_1>
  </s:Body>
</s:Envelope>
```



```

    </BenchmarkItem>
    <BenchmarkItem>
      <Language>English</Language>
      <BenchmarkId>11020242</BenchmarkId>
      <BenchmarkName>LIBOR USD 3 Months</BenchmarkName>
      <BenchmarkCategory>RiskFreeIndex</BenchmarkCategory>
    </BenchmarkItem>
    <BenchmarkItem>
      <Language>English</Language>
      <BenchmarkId>11005483</BenchmarkId>
      <BenchmarkName>MSCI World/Health Care TR</BenchmarkName>
      <BenchmarkCategory>TechnicalIndicator</BenchmarkCategory>
    </BenchmarkItem>
  </BenchmarkList>
</BenchmarkType>
</BenchmarksResult>
</GetBenchmarks_Response_1>
</Body>
</Envelope>

```

Element	Description
LipperId	The asset's Lipper ID.
BenchmarkList	The list of BenchmarkItems that contain the asset's list of benchmarks. Contains the following elements: Language - the language for the benchmark information. BenchmarkId - the Benchmark ID. BenchmarkName - the name of the benchmark. BenchmarkCategory - the benchmark category.

24.4.13 Get Bottom Performers (GetBottomPerformers_1)

You can use the GetBottomPerformers_1 method to retrieve the poorest or bottom-performing funds for the given country or countries.

The example below gets the poorest funds for the USA expressed in US dollars and displayed in English language. The request is also configured to retrieve only 10 poorest funds and include hedge funds in the results.

XML Sample Request - Getting Bottom Performers

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetBottomPerformers_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetBottomPerformers_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <countryCode>
        <Countries>USA</Countries>
      </countryCode>
      <currencyCode>USD</currencyCode>
      <numberOfAssets>10</numberOfAssets>
      <language>English</language>
      <includeHedgeFunds>true</includeHedgeFunds>
    </GetBottomPerformers_Request_1>
  </Body>
</Envelope>

```

Parameter	Description
Countries	The country for which the poorest-performing funds should be returned. For full listing of available country



	codes, see section Countries Enumeration in the Lipper Data Enumerations chapter.
currencyCode	The display currency for the returned list. For full listing of available currency codes, see section Currency Code Enumeration in the Lipper Data Enumerations chapter.
numberOfAssets	The number of funds that should be included in the list of poorest performers.
language	The display language for the returned data.
includeHedgeFunds	If true, hedge funds will be included in the returned list of poorest-performing funds; otherwise, hedge funds will not be included in the results. Hedge funds are investment funds open to a limited range of investors. A hedge fund allows more investment and trading activities than other investment funds and an investor pays a special performance fee to its investment manager.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

The response returns a list of <PerformerType> elements that contain the poorest performing funds:

XML Sample Response - Getting Bottom Performers

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/
    GetBottomPerformers_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetBottomPerformers_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <BottomPerformersResult>
        <PerformerType>
          <CountryCode>USA</CountryCode>
          <PerformerList>
            <PerformerItem>
              <LipperId>40000354</LipperId>
              <Language>English</Language>
              <FundShortName>Ameritor Investment</FundShortName>
              <PerfYTD>-85.71429</PerfYTD>
            </PerformerItem>
            <PerformerItem>
              <LipperId>40105153</LipperId>
              <Language>English</Language>
              <FundShortName>Direxion:EM Br 2x;Inv</FundShortName>
              <PerfYTD>-50.35505</PerfYTD>
            </PerformerItem>
            ...
            <PerformerItem>
              <LipperId>40096684</LipperId>
              <Language>English</Language>
              <FundShortName>ProFunds:UltSh Dow30;Svc</FundShortName>
              <PerfYTD>-23.85066</PerfYTD>
            </PerformerItem>
            <PerformerItem>
              <LipperId>40096683</LipperId>
              <Language>English</Language>
              <FundShortName>ProFunds:UltSh Dow30;Inv</FundShortName>
              <PerfYTD>-23.06207</PerfYTD>
            </PerformerItem>
          </PerformerList>
        </PerformerType>
      </BottomPerformersResult>
    </GetBottomPerformers_Response_1>
  </Body>
</Envelope>
```



Element	Description
CountryCode	The country code that represents the country to which the performance list pertains.
PerformerList	The list of the country's fund performance data. Contains the following elements: • LipperId - the asset's Lipper ID. • Language - the display language for the fund performance data. • FundShortName - the fund's short name. • PerfYTD - the asset's year-to-date performance value (capital gains).

24.4.14 Get Bottom Performers By Classification Scheme (GetBottomPerformersByClassificationScheme_1)

You can use the `GetBottomPerformersByClassificationScheme_1` method to retrieve the poorest or bottom-performing funds (based on year-to-date performance) for the given classification scheme.

A classification is a designation assigned to assets based on various characteristics of the assets. For example, "Equity North America" is a classification assigned to an asset. Classifications are organized into classification schemes. Lipper offers or tracks multiple classification schemes around the world. For example, Equity North America is a classification within the Lipper Global Classification scheme.

The example below retrieves 10 poorest funds for the 'ABILIFE2008' classification scheme expressed in US dollars and displayed in English language:

XML Sample Request - Getting Bottom Performers By Classification Scheme	
<pre> <Envelope xmlns="http://www.w3.org/2003/05/soap-envelope"> <Header> <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To> <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID> <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetBottomPerformersByClassificationScheme_1</Action> <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1"> <ApplicationID>[AppID]</ApplicationID> <Token>[service token]</Token> </Authorization> </Header> <Body> <GetBottomPerformersByClassificationScheme_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1"> <classificationSchemeCode>ABILIFE2008</classificationSchemeCode> <language>English</language> <currencyCode>USD</currencyCode> <numberOfClasses>10</numberOfClasses> <calculationPeriodName> <CalculationTypeId>OneMonthPerformancetoLastMonthEnd</CalculationTypeId> </calculationPeriodName> </GetBottomPerformersByClassificationScheme_Request_1> </Body> </Envelope> </pre>	

Parameter	Description
classificationSchemeCode	The classification scheme for which bottom-performing funds should be returned. See the list of available classification schemes in the Classification Scheme Enumeration section in the Lipper Data Enumerations chapter.
language	The display language for the returned list.
currencyCode	The display currency for the returned data. For full listing of available currency codes, see section Currency Code Enumeration in the Lipper Data Enumerations chapter.
numberOfClasses	The number of classes to include in the search results.
calculationPeriod	One or more calculation periods for which performance data will be returned. Contains <code><CalculationTypeId></code> element that represents a static performance calculation supported by Lipper. For full listing of available calculation typeIDs, see section Calculation TypeId Enumeration in the Lipper Data Enumerations chapter.



Note: The GetBottomPerformersByClassificationScheme_1 operation works as desired only if a single <CalculationTypeId> is specified though declared as multiple in the schema.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

The response returns performance data for the given classification scheme and time period:

XML Sample Response - Getting Bottom Performers By Classification Scheme

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/
    GetBottomPerformersByClassificationScheme_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetBottomPerformersByClassificationScheme_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/
    LipperFundamentals_1">
      <BottomPerformersByClassificationSchemeResult>
        <ClassificationSchemeCode>ABILIFE2008</ClassificationSchemeCode>
        <ClassificationSchemeName>ABI Life Scheme</ClassificationSchemeName>
        <Language>English</Language>
        <CalculationList>
          <PerformanceCalculation>
            <Language>English</Language>
            <CalculationPeriodName>1 Month Performance to Last Month End</CalculationPeriodName>
            <CalculationAcronym>1mPerf:</CalculationAcronym>
            <AsOfDate>2009-03-31T00:00:00</AsOfDate>
            <PerformerList>
              <PerformerCalculationItem>
                <IndexIdentity>
                  <LipperId>19074021</LipperId>
                  <Language>English</Language>
                  <Name>ABI UK - Sterling Corporate Bond-Life</Name>
                </IndexIdentity>
                <ClassId>28981</ClassId>
                <Language>English</Language>
                <Value>-1.784970</Value>
              </PerformerCalculationItem>
              <PerformerCalculationItem>
                <IndexIdentity>
                  <LipperId>19074024</LipperId>
                  <Language>English</Language>
                  <Name>ABI UK - Sterling High Yield-Life</Name>
                </IndexIdentity>
                <ClassId>28984</ClassId>
                <Language>English</Language>
                <Value>-1.596770</Value>
              </PerformerCalculationItem>
              ...
              <PerformerCalculationItem>
                <IndexIdentity>
                  <LipperId>19074030</LipperId>
                  <Language>English</Language>
                  <Name>ABI UK - Money Market-Life</Name>
                </IndexIdentity>
                <ClassId>28990</ClassId>
                <Language>English</Language>
                <Value>0.579320</Value>
              </PerformerCalculationItem>
            </PerformerList>
          </PerformanceCalculation>
        </CalculationList>
      </BottomPerformersByClassificationSchemeResult>
    </GetBottomPerformersByClassificationScheme_Response_1>
  </s:Body>
```



```
</Envelope>
```

Element	Description
ClassificationScheme Code	The classification type's ID.
ClassificationScheme Name	The name of the classification scheme.
Language	The display language for the asset identity information.
CalculationList	The performance calculation data. Contains the following elements: • Language - the display language for the asset identity information. • CalculationPeriodName - the name of the performance calculation period. • CalculationAcronym - the calculation acronym. • AsOfDate - the date for which the retrieved data is valid. • PerformerList - the performer value. A list of <PerformerCalculationItem> elements. Contains the following elements: • IndexIdentity- the asset identity (LipperId, Language and Name). • ClassId - the class ID. • Language - the display language for the performance calculation data. • Value - the value of the performance calculation.

24.4.15 Get Bottom Performers By LG Classification Schema (GetBottomPerformersByLGClassificationSchema_1)

You can use the GetBottomPerformersByLGClassificationSchema_1 method to retrieve the bottom or poorest-performing funds (based on year-to-date performance) for one or more Lipper Global Classification Schema.

A classification is a designation assigned to assets based on various characteristics of the assets. For example, "Equity North America" is a classification assigned to an asset. Classifications are organized into classification schemes. Lipper offers or tracks multiple classification schemes around the world. For example, Equity North America is a classification within the Lipper Global Classification scheme.

Lipper Fund Classifications

Lipper fund classifications provide the ability to make meaningful 'like for like' comparisons across funds with similar investment mandates. Choose from style based holdings classifications; proprietary fund association local market schemes; or take a much broader approach by using the Lipper Global Classification which encompasses all funds tracked by Lipper.

The example below retrieves 10 poorest funds for the 'LipperGlobal' classification schema expressed in US dollars and displayed in English language:

XML Sample Request - Getting Bottom Performers By LG Classification Schema

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetBottomPerformersByLGClassificationSchema_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetBottomPerformersByLGClassificationSchema_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <IGClassificationSchemaName>
        <LGClassificationSchema>LipperGlobal</LGClassificationSchema>
      </IGClassificationSchemaName>
      <currencyCode>USD</currencyCode>
      <language>English</language>
      <numberOfAssets>10</numberOfAssets>
    </GetBottomPerformersByLGClassificationSchema_Request_1>
  </Body>
</Envelope>
```



```
</Body>
</Envelope>
```

Parameter	Description
IGClassificationSchemaName	The Lipper Global Classification schema for which bottom-performing funds should be returned. Available Lipper Global Classification schemes are listed in the LG Classification Scheme Enumeration section in the Lipper Data Enumerations chapter.
currencyCode	The display currency for the returned data. For full listing of available currency codes, see section Currency Code Enumeration in the Lipper Data Enumerations chapter.
language	The display language for the returned data.
numberOfAssets	The number of bottom-performing assets to be returned.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

The response returns the bottom-performing funds for the given Lipper Classification Schema:

XML Sample Response - Getting Bottom Performers By LG Classification Schema

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/
    GetBottomPerformersByLGClassificationSchema_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetBottomPerformersByLGClassificationSchema_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/
    LipperFundamentals_1">
      <BottomPerformersByLGClassificationSchemaResult>
        <LGPerformerType>
          <LGClassificationSchemeName>LipperGlobal</LGClassificationSchemeName>
          <LGPerformerList>
            <LGPerformerItem>
              <LipperId>65030166</LipperId>
              <Language>English</Language>
              <FundShortName>ALA - Asia Global Balanced</FundShortName>
              <PerfYTD>-93.52841</PerfYTD>
            </LGPerformerItem>
            <LGPerformerItem>
              <LipperId>67008651</LipperId>
              <Language>English</Language>
              <FundShortName>Blackrock UK Em Cos EUR</FundShortName>
              <PerfYTD>-87.06229</PerfYTD>
            </LGPerformerItem>
            ...
            <LGPerformerItem>
              <LipperId>62005268</LipperId>
              <Language>English</Language>
              <FundShortName>SBI Softbank SBI Group EQ</FundShortName>
              <PerfYTD>-54.60367</PerfYTD>
            </LGPerformerItem>
            <LGPerformerItem>
              <LipperId>67004319</LipperId>
              <Language>English</Language>
              <FundShortName>Hasenbichler DRC AG</FundShortName>
              <PerfYTD>-49.98813</PerfYTD>
            </LGPerformerItem>
          </LGPerformerList>
        </LGPerformerType>
      </BottomPerformersByLGClassificationSchemaResult>
    </GetBottomPerformersByLGClassificationSchema_Response_1>
  </s:Body>
</Envelope>
```



Element	Description
LGClassificationSchemeName	The Lipper Global Classification Scheme name.
LGPerformerList	The list of funds. Contains the following elements: • LipperID - the asset's Lipper ID. • Language - the display language for the data. • FundShortName - the short name of the asset. • PerfYTD - the fund's year-to-date performance.

24.4.16 Get Charges (GetCharges_1)

You can use the GetCharges_1 method to retrieve the information about various charges paid by the given asset(s) as of the given effective date.

The example below retrieves charges information for the asset with '60003333' LipperID as of 2009-03-03.

XML Sample Request - Getting Charges

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetCharges_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetCharges_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <lipperIDs>
        <int>60003333</int>
      </lipperIDs>
      <effectiveDate>2009-03-03</effectiveDate>
    </GetCharges_Request_1>
  </Body>
</Envelope>
```

Parameter	Description
lipperID	A unique eight- or nine-digit number that identifies an asset.
effectiveDate	The effective date for the charges data.

The response returns the charges data for the specified asset(s):

XML Sample Response - Getting Charges

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetCharges_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetCharges_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
```




```

<ChargesResult>
  <ChargesType>
    <LipperId>60003333</LipperId>
    <Name>Janus Global Life Sciences EUR A Acc</Name>
    <ChargesList>
      <ChargesItem>
        <DataDate>1800-01-01</DataDate>
        <ChargeId>777</ChargeId>
        <ChargeName>Initial</ChargeName>
        <Minimum xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
        <Maximum>6.25</Maximum>
        <Actual xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
      </ChargesItem>
      <ChargesItem>
        <DataDate>1800-01-01</DataDate>
        <ChargeId>779</ChargeId>
        <ChargeName>Redemption</ChargeName>
        <Minimum>0</Minimum>
        <Maximum>1</Maximum>
        <Actual xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
      </ChargesItem>
      <ChargesItem>
        <DataDate>1800-01-01</DataDate>
        <ChargeId>778</ChargeId>
        <ChargeName>Annual</ChargeName>
        <Minimum xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
        <Maximum xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
        <Actual>1.5</Actual>
      </ChargesItem>
    </ChargesList>
  </ChargesType>
</ChargesResult>
</GetCharges_Response_1>
</Body>
</Envelope>

```

Element	Description
LipperId	The asset identifier of a particular collective investment within Lipper.
Name	The name of the asset.
ChargesList	The list of all the charges for the asset. Contains the following elements: • DataDate - the data date for the charge. • ChargeId - the numeric ID of the charge item. • ChargeName - the name of the charge. • Minimum - the minimum charge for the charge item. • Maximum - the maximum charge for the charge item. • Actual - the actual charge for the item.

24.4.17 Get Classification (GetClassification_1)

You can use the GetClassification_1 method to retrieve classification types for the given asset(s) based on the classSchemeID.

A classification is a designation assigned to assets based on various characteristics of the assets. For example, "Equity North America" is a classification assigned to an asset. Classifications are organized into classification schemes. Lipper offers or tracks multiple classification schemes around the world. For example, Equity North America is a classification within the Lipper Global Classification scheme.

Lipper Fund Classifications

Lipper fund classifications provide the ability to make meaningful 'like for like' comparisons across funds with similar investment mandates. Choose from style based holdings classifications; proprietary fund association local market schemes; or take a much broader approach by using the Lipper Global Classification which encompasses all funds tracked by Lipper.

The example below retrieves classification types for the asset with '60003333' LipperID based on '1671' classSchemeID for the specified date and displayed in English language.

XML Sample Request - Getting Classification



```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetClassification_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetClassification_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <lipperIDs>
        <int>60003333</int>
      </lipperIDs>
      <classSchemeID>1671</classSchemeID>
      <language>English</language>
      <dataDate>2009-03-27</dataDate>
    </GetClassification_Request_1>
  </Body>
</Envelope>

```

Parameter	Description
lipperIDs	A list of one or more Lipper IDs for which data will be returned.
classSchemeID	The classification scheme ID.
language	The display language for the returned list.
dataDate	The date for which classification data will be returned.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

The response returns the classification data:

XML Sample Response - Getting Classification

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetClassification_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetClassification_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <ClassificationResult>
        <ClassSchemeAssetType>
          <LipperId>60003333</LipperId>
          <Language>English</Language>
          <ClassSchemeId>1671</ClassSchemeId>
          <ClassId>1690</ClassId>
          <ClassName>Equity Global Eq Specialist</ClassName>
        </ClassSchemeAssetType>
      </ClassificationResult>
    </GetClassification_Response_1>
  </Body>
</Envelope>

```

Element	Description
LipperId	The asset's Lipper ID.



Language	The display language for the class scheme information.
ClassSchemeId	The numeric classification scheme ID for which the classification type represented in ClassId is valid.
ClassId	The numeric classification type ID.
ClassName	The name of the classification type.

24.4.18 Get Classification Basic (GetClassificationBasic_1)

You can use the GetClassificationBasic_1 method to retrieve data only for Israel TASE Classification Fund classification as defined by the Tel Aviv Stock Exchange.

The example below retrieves classification types for the asset with '60003333' LipperID based on '30755' classSchemeID for the specified date and displayed in English language.

ClassSchemeID 30755 stands for Israel TASE Classification.

XML Sample Request - Getting Classification Basic

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetClassificationBasic_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetClassificationBasic_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <lipperIDs>
        <int>60003333</int>
      </lipperIDs>
      <classSchemeID>30755</classSchemeID>
      <language>English</language>
      <dataDate>2009-03-27T21:32:52</dataDate>
    </GetClassificationBasic_Request_1>
  </Body>
</Envelope>
```

Parameter	Description
lipperIDs	A list of one or more Lipper IDs for which data will be returned.
classSchemeID	The classification scheme ID.
language	The display language for the returned list.
dataDate	The date for which classification data will be returned.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

The response returns the classification data (no classification found):

XML Sample Response - Getting Classification Basic

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetClassificationBasic_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
    </CacheResponse>
  </s:Header>
  <s:Body>
    <GetClassificationBasic_1_Reply xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <ClassificationData>
        <NoClassificationFound>
          <MessageID>[Unique Message ID]</MessageID>
          <Language>English</Language>
          <DataDate>2009-04-17T10:41:48.639875Z</DataDate>
        </NoClassificationFound>
      </ClassificationData>
    </GetClassificationBasic_1_Reply>
  </s:Body>
</s:Envelope>
```



```

    <DoNotStore />
  </CacheResponse>
  <a:RelatesTo>[MessageID]</a:RelatesTo>
</s:Header>
<s:Body>
  <GetClassificationBasic_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
    <ClassificationResult>
      </ClassificationResult>
    </GetClassificationBasic_Response_1>
  </Body>
</Envelope>

```

Element	Description
LipperId	The asset's Lipper ID.
Language	The display language for the class scheme information.
ClassSchemeId	The numeric classification scheme ID for which the classification type represented in ClassId is valid.
ClassId	The numeric classification type ID.
ClassName	The name of the classification type.

24.4.19 Get Classifications (GetClassifications_1)

You can use the GetClassifications_1 method to retrieve all of the classification information for the given asset(s), including classification schemes and the corresponding classification types.

A classification is a designation assigned to assets based on various characteristics of the assets. For example, "Equity North America" is a classification assigned to an asset. Classifications are organized into classification schemes. Lipper offers or tracks multiple classification schemes around the world. For example, Equity North America is a classification within the Lipper Global Classification scheme.

The example below retrieves classification data for the asset with '60003333' LipperID as of 2009-03-27 and displayed in English language.

XML Sample Request - Getting Classifications

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetAssetDetailsAnalysisSP_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetClassifications_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <lipperIDs>
        <int>60003333</int>
      </lipperIDs>
      <language>English</language>
      <dataDate>2009-03-27</dataDate>
    </GetClassifications_Request_1>
  </Body>
</Envelope>

```

Parameter	Description
lipperID	A list of one or more Lipper IDs for which data will be returned.
language	The display language for the returned data.



dataDate	The date for which a classification must be in effect in order to be returned.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

Assets can belong to one or more classification schemes and within each scheme, the asset is assigned a classification code. For example, "Lipper Global" is a classification scheme and a fund's Lipper Global scheme type can be any type that is valid for the Lipper Global scheme, such as "Equity North America" or "Equity Global".

The response returns the classification information for the specified asset:

XML Sample Response - Getting Classifications

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/
    GetAssetDetailsAnalysisSP_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetClassifications_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <ClassificationsResult>
        <ClassSchemeType>
          <ClassSchemeId>1671</ClassSchemeId>
          <ClassSchemeCode>UKOFFSHORE</ClassSchemeCode>
          <ClassSchemeName>Lipper UK Offshore Fund</ClassSchemeName>
          <Language>English</Language>
          <ClassList>
            <ClassType>
              <ClassId>1690</ClassId>
              <ClassName>Equity Global Eq Specialist</ClassName>
              <Language>English</Language>
            </ClassType>
          </ClassList>
          <LipperId>60003333</LipperId>
        </ClassSchemeType>
        <ClassSchemeType>
          <ClassSchemeId>3289</ClassSchemeId>
          <ClassSchemeCode>LIPPERITG</ClassSchemeCode>
          <ClassSchemeName>Lipper Italian General</ClassSchemeName>
          <Language>English</Language>
          <ClassList>
            <ClassType>
              <ClassId>3322</ClassId>
              <ClassName>Equity Sector Non-Cyc Consumer</ClassName>
              <Language>English</Language>
            </ClassType>
          </ClassList>
          <LipperId>60003333</LipperId>
        </ClassSchemeType>
        ...
        <ClassSchemeType>
          <ClassSchemeId>1784</ClassSchemeId>
          <ClassSchemeCode>LIPPERCH</ClassSchemeCode>
          <ClassSchemeName>Lipper Schweiz</ClassSchemeName>
          <Language>English</Language>
          <ClassList>
            <ClassType>
              <ClassId>10253</ClassId>
              <ClassName>Equity Sector Pharma&Health</ClassName>
              <Language>English</Language>
            </ClassType>
          </ClassList>
          <LipperId>60003333</LipperId>
        </ClassSchemeType>
      </ClassificationsResult>
    </GetClassifications_Response_1>
  </s:Body>
</s:Envelope>
```



```
</Body>
</Envelope>
```

Element	Description
ClassSchemeId	The classification scheme's numeric ID.
ClassSchemeCode	The classification scheme's numeric code.
ClassSchemeName	The name of the classification scheme.
Language	The display language for classification data.
ClassList	The asset's classification list for the classification scheme set in ClassSchemeName. Contains the following elements: • ClassId - the classification type's numeric ID. • ClassName - the name of the classification type. • Language - the display language for classification data.

24.4.20 Get Cross Reference (GetCrossReference_1)

You can use the GetAssetDetailsAnalysisSP_1 method to retrieve the cross-reference information (asset identifier and Lipper ID) for the given cross-reference code.

A cross-reference code is generally a unique identifier that is used to represent an asset. For example, "ticker symbol" or CUSIP, or ISIN are cross-reference codes.

The example below retrieves the cross-reference information for the '1438' xRefID with 'KR5102563818' code and displayed in English language.

XML Sample Request - Getting Cross Reference

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetCrossReference_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetCrossReference_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <code>KR5102563818</code>
      <xRefID>1438</xRefID>
      <language>English</language>
    </GetCrossReference_Request_1>
  </Body>
</Envelope>
```

Parameter	Description
code	An asset's alphabetic cross-reference code. Cross-reference data will be returned for this asset based on the code. An asset can have many codes because each of the asset identifiers has its own code.
xRefID	The numeric cross-reference ID.
language	The display language for the returned cross-reference data.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.



Note: This method returns cross-reference information for only one cross-reference code. To retrieve information for more than one code, use the `CrossReferenceBulk_1` method.

The response returns the cross-reference information for the given code:

XML Sample Response - Getting Cross Reference

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/
    GetCrossReference_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetCrossReference_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <CrossReferenceResult>
        <LipperId>65028707</LipperId>
        <CrossReferenceList>
          <CrossReferenceItemValue>
            <Language>English</Language>
            <XrefId>1438</XrefId>
            <ReferenceCode>KOREA</ReferenceCode>
            <CodeShortName>Korea Code</CodeShortName>
            <CodeFullName>Korea Code</CodeFullName>
            <XrefValue>KR5102563818</XrefValue>
          </CrossReferenceItemValue>
        </CrossReferenceList>
      </CrossReferenceResult>
    </GetCrossReference_Response_1>
  </s:Body>
</Envelope>
```

Element	Description
LipperId	The asset's Lipper ID.
CrossReferenceList	The asset's list of cross-reference codes. Contains the following elements: • Language - the display language for the cross-reference information. • XrefId - the numeric Cross-reference ID. • ReferenceCode - the alphabetic cross-reference code (e.g., the five-character symbol for a NASDAQ cross-reference). • CodeShortName - the cross-reference short name (e.g., NASDAQ Ticker). • CodeFullName - the full name of the cross-reference. • XrefValue - the value for the cross reference code.

24.4.21 Get Cross Reference Bulk (GetCrossReferenceBulk_1)

You can use the `GetCrossReferenceBulk_1` method to retrieve the cross-reference information (asset identifier and Lipper ID) for the given cross-reference codes.

A cross-reference code is generally a unique identifier that is used to represent an asset. For example, "ticker symbol" or CUSIP, or ISIN are cross-reference codes.

The example below retrieves the cross-reference information displayed in English language for the specified cross-reference codes.

XML Sample Request - Getting Cross Reference Bulk

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
```

```

<MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
<Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/
LipperFundamentals_1/GetCrossReferenceBulk_1</Action>
<Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
  <ApplicationID>[AppID]</ApplicationID>
  <Token>[service token]</Token>
</Authorization>
</Header>
<Body>
  <GetCrossReferenceBulk_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
    <codes>
      <string>4JGA1E</string>
      <string>KR5102563818</string>
      <string>1060678</string>
    </codes>
    <xRefID>1438</xRefID>
    <language>English</language>
  </GetCrossReferenceBulk_Request_1>
</Body>
</Envelope>

```

Parameter	Description
codes	An asset's alphabetic cross-reference code. Cross-reference data will be returned for this asset based on the code. An asset can have many codes because each of the asset's asset identifiers has its own code.
xRefID	The numeric cross-reference ID.
language	The display language for the returned cross-reference data.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

The response returns the cross-reference information for the given codes:

XML Sample Response - Getting Cross Reference Bulk

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/
    GetCrossReferenceBulk_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetCrossReferenceBulk_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <CrossReferenceBulkResult>
        <CrossReferenceType>
          <LipperId>65028707</LipperId>
          <CrossReferenceList>
            <CrossReferenceItemValue>
              <Language>English</Language>
              <XrefId>1438</XrefId>
              <ReferenceCode>KOREA</ReferenceCode>
              <CodeShortName>Korea Code</CodeShortName>
              <CodeFullName>Korea Code</CodeFullName>
              <XrefValue>KR5102563818</XrefValue>
            </CrossReferenceItemValue>
          </CrossReferenceList>
        </CrossReferenceType>
      </CrossReferenceBulkResult>
    </GetCrossReferenceBulk_Response_1>
  </s:Body>
</Envelope>

```



Element	Description
LipperId	The asset's Lipper ID.
CrossReferenceList	The asset's list of cross-reference codes. Contains the following elements: • Language - the display language for the cross-reference information. • XrefId - the numeric Cross-reference ID. • ReferenceCode - the alphabetic cross-reference code (e.g., the five-character symbol for a NASDAQ cross-reference). • CodeShortName - the cross-reference short name (e.g., NASDAQ Ticker). • CodeFullName - the full name of the cross-reference. • XrefValue - the value for the cross reference code.

24.4.22 Get Cross Reference By Identifier Type (GetCrossReferenceByIdentifierType_2)

You can use the GetCrossReferenceByIdentifierType_2 method to retrieve all of the available cross-reference codes (including CUSIP, ISIN, and NASDAQ, among others) based on the identifier type filter to which the Lipper IDs for the given asset(s) map.

A cross reference code is generally a unique identifier that is used to represent an asset. For example, "ticker symbol" or CUSIP, or ISIN are cross reference codes.

Note: The GetCrossReferenceByIdentifierType_2 method requires at least 1 XREF Code and validates whether the user has access to the specified XREF code.

The example below gets cross-reference codes for the assets with '65028707' and '60003333' LipperIDs based on the '1438' identifier type and displayed in English language.

XML Sample Request - Getting Cross Reference By Identifier Type

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetCrossReferenceByIdentifierType_2</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetCrossReferenceByIdentifierType_Request_2 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <lipperIDs>
        <int>65028707</int>
        <int>60003333</int>
      </lipperIDs>
      <language>English</language>
      <identifierTypeFilter>
        <int>1438</int>
      </identifierTypeFilter>
    </GetCrossReferenceByIdentifierType_Request_2>
  </Body>
</Envelope>
```

Parameter	Description
lipperID	A unique eight- or nine-digit number that identifies an asset.
language	The display currency for the returned cross-reference data.
identifierTypeFilter	The identifier type filter.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.



The response returns the cross-reference codes for the given asset(s):

XML Sample Response - Getting Cross Reference By Identifier Type

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/
    GetCrossReferenceByIdentifierType_2_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetCrossReferenceByIdentifierType_Response_2 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/
    LipperFundamentals_1">
      <CrossReferenceByIdentifierTypeResult>
        <CrossReferenceType>
          <LipperId>65028707</LipperId>
          <CrossReferenceList>
            <CrossReferenceItemValue>
              <Language>English</Language>
              <XrefId>1438</XrefId>
              <ReferenceCode>KOREA</ReferenceCode>
              <CodeShortName>Korea Code</CodeShortName>
              <CodeFullName>Korea Code</CodeFullName>
              <XrefValue>KR5102563818</XrefValue>
            </CrossReferenceItemValue>
          </CrossReferenceList>
        </CrossReferenceType>
      </CrossReferenceByIdentifierTypeResult>
    </GetCrossReferenceByIdentifierType_Response_2>
  </s:Body>
</Envelope>
```

Element	Description
LipperId	The asset's Lipper ID.
CrossReferenceList	The asset's list of cross-reference codes. Contains the following elements: • Language - the display language for the cross-reference information. • XrefId - the numeric Cross-reference ID. • ReferenceCode - the alphabetic cross-reference code (e.g., the five-character symbol for a NASDAQ cross-reference). • CodeShortName - the cross-reference short name (e.g., NASDAQ Ticker). • CodeFullName - the full name of the cross-reference. • XrefValue - the value for the cross reference code.

24.4.23 Get Cross Reference By Identifier Type IM (GetCrossReferenceByIdentifierTypeIM_1)

You can use the GetCrossReferenceByIdentifierTypeIM_1 method provides an unrestricted version of GetCrossReferenceByIdentifierType_2 and is available to Investment Management users.

The example below gets cross-reference codes for the assets with '65028707' and '60003333' LipperIDs based on the '1438' identifier type and displayed in English language.

XML Sample Request - Getting Cross Reference By Identifier Type IM

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
  </Header>
  <Body>
    <GetCrossReferenceByIdentifierTypeIM_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <LipperId>65028707</LipperId>
      <LipperId>60003333</LipperId>
      <IdentifierType>1438</IdentifierType>
      <Language>English</Language>
    </GetCrossReferenceByIdentifierTypeIM_1>
  </Body>
</Envelope>
```



```

<Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/
LipperFundamentals_1/GetCrossReferenceByIdentifierTypeIM_1</Action>
<Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
  <ApplicationID>[AppID]</ApplicationID>
  <Token>[service token]</Token>
</Authorization>
</Header>
<Body>
  <GetCrossReferenceByIdentifierTypeIM_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/
LipperFundamentals_1">
    <lipperIDs>
      <int>65028707</int>
      <int>60003333</int>
    </lipperIDs>
    <language>English</language>
    <identifierTypeFilter>
      <int>1438</int>
    </identifierTypeFilter>
  </GetCrossReferenceByIdentifierTypeIM_Request_1>
</Body>
</Envelope>

```

Parameter	Description
lipperID	A unique eight- or nine-digit number that identifies an asset.
language	The display currency for the returned cross-reference data.
identifierTypeFilter	The identifier type filter.

The response returns the cross-reference codes for the given asset(s):

XML Sample Response - Getting Cross Reference By Identifier Type IM

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/
GetCrossReferenceByIdentifierTypeIM_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetCrossReferenceByIdentifierTypeIM_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/
LipperFundamentals_1">
      <CrossReferenceByIdentifierTypeResult>
        <CrossReferenceType>
          <LipperId>65028707</LipperId>
          <CrossReferenceList>
            <CrossReferenceItemValue>
              <Language>English</Language>
              <XrefId>1438</XrefId>
              <ReferenceCode>KOREA</ReferenceCode>
              <CodeShortName>Korea Code</CodeShortName>
              <CodeFullName>Korea Code</CodeFullName>
              <XrefValue>KR5102563818</XrefValue>
            </CrossReferenceItemValue>
          </CrossReferenceList>
        </CrossReferenceType>
      </CrossReferenceByIdentifierTypeResult>
    </GetCrossReferenceByIdentifierTypeIM_Response_1>
  </s:Body>
</Envelope>

```

Element	Description



LipperId	The asset's Lipper ID.
CrossReference List	The asset's list of cross-reference codes. Contains the following elements: • Language - the display language for the cross-reference information. • XrefId - the numeric Cross-reference ID. • ReferenceCode - the alphabetic cross-reference code (e.g., the five-character symbol for a NASDAQ cross-reference). • CodeShortName - the cross-reference short name (e.g., NASDAQ Ticker). • CodeFullName - the full name of the cross-reference. • XrefValue - the value for the cross reference code.

24.4.24 Get Cross Reference To Lipper Id (GetCrossReferenceToLipperId_1)

You can use the GetCrossReferenceToLipperId_1 method to retrieve the Lipper ID for the given asset identifier (i.e., CUSIP, ISIN, etc.).

A cross reference code is generally a unique identifier that is used to represent an asset. For example, "ticker symbol" or CUSIP, or ISIN are cross reference codes.

The example below gets Lipper ID for the 'KR102563818' asset identifier:

XML Sample Request - Getting Cross Reference To Lipper Id

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetCrossReferenceToLipperId_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    GetCrossReferenceToLipperId_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance">
      <code>KR5102563818</code>
      <language>English</language>
    </GetCrossReferenceToLipperId_Request_1>
  </Body>
</Envelope>
```

Parameter	Description
code	The asset identifier code.
language	The display language for the returned data.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

The response returns Lipper ID for the specified asset identifier:

XML Sample Response - Getting Cross Reference To Lipper Id

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/
    GetCrossReferenceToLipperId_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
  </s:Header>
```



<a:RelatesTo>[MessageID]</a:RelatesTo> </s:Header> <s:Body>
GetCrossReferenceToLipperId_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1"> <CrossReferenceToLipperIdResult> <SearchResultType> <LipperId>65028707</LipperId> <Language>English</Language> <AssetName>Hana UBS FC LG Elec / Samsung Fire Derivatives 1</AssetName> <Domicile>Korea (Republic of)</Domicile> <AssetCategory>Mutual Funds</AssetCategory> <Promoter>Hana UBS Asset</Promoter> <Administrator>HSBC Fund Service</Administrator> </SearchResultType> </CrossReferenceToLipperIdResult> </GetCrossReferenceToLipperId_Response_1>
</Body> </Envelope>

Element	Description
LipperId	The asset's Lipper ID.
Language	The display language for the asset identity information. Asset identity is the information used to characterize the fund such as LipperID or fund name.
AssetName	The asset's name.
Domicile	The asset's domicile.
AssetCategory	The asset's category. Asset Category identifies the universe that the asset belongs to, such as, mutual fund, indices, exchange traded fund, etc.
Promoter	The asset's promoter's name. A promoter is the company responsible for promoting the fund.
Administrator	The asset's administrator's name. The administrator provides back office support and compliance services to the fund.

24.4.25 Get Currency History (GetCurrencyHistory_1)

You can use the GetCurrencyHistory_1 method to retrieve the currency history for the given asset(s). The currency history includes up to three time periods along with the asset's currency for the time periods.

The example below gets currency history list for the asset with '60003333' LipperID.

XML Sample Request - Getting Currency History	
<pre> <Envelope xmlns="http://www.w3.org/2003/05/soap-envelope"> <Header> <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To> <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID> <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetCurrencyHistory_1</Action> <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1"> <ApplicationID>[AppID]</ApplicationID> <Token>[service token]</Token> </Authorization> </Header> <Body> <GetCurrencyHistory_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1"> <lipperIDs> <int>60003333</int> </lipperIDs> <language>English</effectiveDate> </GetCurrencyHistory_Request_1> </Body> </Envelope> </pre>	

Parameter	Description



lipperID	A unique eight- or nine-digit number that identifies an asset.
language	The display language for the returned list.

The response returns the currency history list for the specified asset(s):

XML Sample Response - Getting Currency History

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/
    GetCurrencyHistory_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetCurrencyHistory_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance">
      <CurrencyHistoryResult>
        <CurrencyHistoryType>
          <LipperId>60003333</LipperId>
          <CurrencyItem>
            <CurrencyItem>
              <StartDate>1800-01-01</StartDate>
              <EndDate>4000-01-01</EndDate>
              <Language>English</Language>
              <CurrencyCode>EUR</CurrencyCode>
              <CurrencyName>Euro</CurrencyName>
            </CurrencyItem>
          </CurrencyItem>
        </CurrencyHistoryType>
      </CurrencyHistoryResult>
    </GetCurrencyHistory_Response_1>
  </Body>
</Envelope>
```

Element	Description
LipperId	The asset's Lipper ID.
CurrencyItem	A list of CurrencyItem that contains the asset's currency history. Contains the following elements: • StartDate - the currency period start date. • EndDate - the currency period end date. • Language - the language that represents the language for the currency period. • CurrencyCode - the alphabetic currency code for the currency period. • CurrencyName - the name of the currency for the currency period.

24.4.26 Get Distribution (GetDistribution_1)

You can use the GetDistribution_1 method to retrieve distribution data for the given asset(s). If distribution data is returned for a fund then the fund distributes income as opposed to accumulating income.

The example below gets the latest available distribution data for the asset with '65028707' LipperID:

XML Sample Request - Getting Distribution

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/
    LipperFundamentals_1/GetDistribution_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
```



```

    <ApplicationID>[AppID]</ApplicationID>
    <Token>[service token]</Token>
  </Authorization>
</Header>
<Body>
  <GetDistribution_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
    <lipperIDs>
      <int>65028707</int>
    </lipperIDs>
    <latestOnly>true</latestOnly>
  </GetDistribution_Request_1>
</Body>
</Envelope>

```

Parameter	Description
lipperID	A unique eight- or nine-digit number that identifies an asset.
latestOnly	If set to true then only the latest available data will be returned without any previous data.

Note: The income that is generated from an investment trust is given to investors through monthly or quarterly distributions. In this manner, distributions are similar to stock dividends; however, they usually offer much higher yields of up to 10% a year. The distributions received reduces a trust's taxable income, therefore, little or no income tax is paid.

The response returns the distribution data for the specified asset:

XML Sample Response - Getting Distribution

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetDistribution_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetDistribution_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <DistributionResult>
        <DistributionType>
          <LipperId>65028707</LipperId>
          <DistributionList>
            <DistributionItem>
              <DataDate>2007-04-24</DataDate>
              <CurrencyCode>KRW</CurrencyCode>
              <DistributionValue>0</DistributionValue>
              <ReinvestmentDate>2007-04-24</ReinvestmentDate>
              <PaymentDate>2007-04-24</PaymentDate>
              <MaxDate>2007-04-24</MaxDate>
              <TaxOperation xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
              <TaxableInterestIncome xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
              <IncomeOperation>PAID</IncomeOperation>
            </DistributionItem>
          </DistributionList>
        </DistributionType>
      </DistributionResult>
    </GetDistribution_Response_1>
  </s:Body>
</Envelope>

```

Element	Description
LipperId	The asset's Lipper ID.
Distribution List	The fund's distribution list. Contains the following elements: DataDate - the date of the distribution.



- **CurrencyCode** - the currency of the distribution.
- **DistributionValue** - the amount of the distribution.
- **ReinvestmentDate** - the date on which reinvestible dividends were reinvested in the fund.
- **PaymentDate** - the payment date, which is the date the distribution payment is made available to the investors.
- **MaxDate** - the date at which distribution expires.
- **TaxOperation** - the tax operation. Tax operation refers to whether the distribution was Paid or Retained (or null) which matters for certain tax bodies such as the European Union.
- **TaxableInterestIncome** - the taxable interest income amount. Distributions paid by a fund from interest received from taxable securities in its portfolio, net of fund expenses. Interest income is taxable at the highest marginal income tax rate.
- **IncomeOperation** - the income operation. The income operation value indicates whether the dividend is paid to the investor (PAID), retained and automatically reinvested by the fund (RETAINED), the fund is interest paying fund, or distribution is not applicable (e.g., Currencies).

24.4.27 Get Dividend Details (GetDividendDetails_1)

You can use the GetDividendDetails_1 method to retrieve the dividend details for the given asset(s). "Dividend" is a portion of a company's generated income (expressed in local currency) distributed to investors on a per share basis.

The example below gets dividend details with previous data for the asset with '65028707' LipperID:

XML Sample Request - Getting Dividend Details

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetDividendDetails_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetDividendDetails_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <lipperIDs>
        <int>65028707</int>
      </lipperIDs>
      <latestOnly>false</latestOnly>
    </GetDividendDetails_Request_1>
  </Body>
</Envelope>
```

Parameter	Description
lipperID	A unique eight- or nine-digit number that identifies an asset.
latestOnly	If set to true then only the latest available data will be returned without any previous data.

The response returns the dividend details for the specified asset:

XML Sample Response - Getting Dividend Details

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetDividendDetails_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
  </s:Header>
  <s:Body>
    <GetDividendDetails_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <dividendDetails>
        <dividendDetailsItem>
          <CurrencyCode>USD</CurrencyCode>
          <DistributionValue>1.23</DistributionValue>
          <ReinvestmentDate>2009-04-17</ReinvestmentDate>
          <PaymentDate>2009-04-17</PaymentDate>
          <MaxDate>2009-04-17</MaxDate>
          <TaxOperation>PAID</TaxOperation>
          <TaxableInterestIncome>1.23</TaxableInterestIncome>
          <IncomeOperation>PAID</IncomeOperation>
        </dividendDetailsItem>
      </dividendDetails>
    </GetDividendDetails_Response_1>
  </s:Body>
</s:Envelope>
```




```

    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetDividendDetails_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <DividendDetailsResult>
        <DividendType>
          <LipperId>65028707</LipperId>
          <DividendList>
            <DividendItem>
              <DividendTypeId xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
              <XDDate>2007-04-24</XDDate>
              <Value>0</Value>
              <CurrencyCode>KRW</CurrencyCode>
              <RecordDate>2007-04-24</RecordDate>
              <PaymentDate>2007-04-24</PaymentDate>
              <IncomeOperation>PAID</IncomeOperation>
              <TaxableInterestIncome xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
              <MaxDate>2007-04-24</MaxDate>
            </DividendItem>
          </DividendList>
        </DividendType>
      </DividendDetailsResult>
    </GetDividendDetails_Response_1>
  </Body>
</Envelope>

```

Element	Description
LipperId	The asset's Lipper ID.
DividendList	The fund's dividend list. Contains the following elements: • DividendTypeId - the numeric dividend Type ID. • XDDate - the ex-dividend date, which is the date the security will begin trading without its dividend. If an investor buys a dividend-paying security before its ex-dividend date, the investor will receive the dividend. The ex-dividend date is the second business day before the record date. • CurrencyCode - the currency of the dividend payment. • RecordDate - the record date, which is the date a company will examine its records to find out who are the its shareholders. An investor must be listed as a holder of record on this date to ensure the right of a dividend payment. • PaymentDate - the payment date, which is the date the dividend payment is made available to the investors. • IncomeOperation - the income operation. The income operation value indicates whether the dividend is paid to the investor (PAID), retained and automatically reinvested by the fund (RETAINED), the fund is interest paying fund, or distribution is not applicable (e.g., Currencies). • TaxableInterestIncome - the taxable interest income. Distributions paid by a fund from interest received from taxable securities in its portfolio, net of fund expenses. Interest income is taxable at the highest marginal income tax rate. • MaxDate - the maximum date.

24.4.28 Get Dividend Details Advanced (GetDividendDetailsAdvanced_1)

You can use the GetDividendDetailsAdvanced_1 method to retrieve the dividend details for the given asset(s). "Dividend" is a portion of a company's generated income (expressed in local currency) distributed to investors on a per share basis.

The example below gets dividend details with previous data for the asset with '65028707' LipperID:

XML Sample Request - Getting Dividend Details Advanced

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetDividendDetailsAdvanced_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetDividendDetailsAdvanced_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <LipperId>65028707</LipperId>
    </GetDividendDetailsAdvanced_1>
  </Body>
</Envelope>

```



```

    </Authorization>
  </Header>
  <Body>
    <GetDividendDetailsAdvanced_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <lipperIDs>
        <int>65028707</int>
      </lipperIDs>
      <latestOnly>false</latestOnly>
    </GetDividendDetailsAdvanced_Request_1>
  </Body>
</Envelope>

```

Parameter	Description
lipperID	A unique eight- or nine-digit number that identifies an asset.
latestOnly	If set to true then only the latest available data will be returned without any previous data.

The response returns the dividend details for the specified asset:

XML Sample Response - Getting Dividend Details Advanced

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetDividendDetailsAdvanced_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetDividendDetailsAdvanced_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <DividendDetailsResult>
        <DividendType>
          <LipperId>65028707</LipperId>
          <DefaultTaxBasis xsi:nil="true"/>
          <IncomeIsInterest xsi:nil="true"/>
          <IncomeDistribution xsi:nil="true"/>
        </DividendType>
      </DividendDetailsResult>
    </GetDividendDetailsAdvanced_Response_1>
  </s:Body>
</Envelope>

```

Element	Description
DividendType	Represents an asset's dividend data. Contains the following elements: • LipperId - the asset's Lipper ID. • DefaultTaxBasis - shows the Tax Id that represents the Tax Status for the Income type. • IncomeIsInterest - indicates if more than 60% of the fund is invested in bond or income securities and is, therefore, taxed at a different rate. • IncomeDistribution - shows the income distribution.

24.4.29 Get Dividends Per Year (GetDividendsPerYear_1)

You can use the GetDividendsPerYear_1 method to retrieve the number of times per year that the given asset(s) is expected to pay dividends.

The example below gets number of times the asset with '65028707' LipperID is expected to pay dividends:

XML Sample Request - Getting Dividends Per Year



```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetDividendsPerYear_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetDividendsPerYear_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <lipperIDs>
        <int>65028707</int>
      </lipperIDs>
    </GetDividendsPerYear_Request_1>
  </Body>
</Envelope>

```

Parameter	Description
lipperID	A unique eight- or nine-digit number that identifies an asset.

The response returns the number of times the asset with '65028707' LipperID is expected to pay dividends:

XML Sample Response - Getting Dividends Per Year

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetDividendsPerYear_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetDividendsPerYear_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <DividendsPerYearResult>
        <ValueNumberType>
          <LipperId>65028707</LipperId>
          <Value>1</Value>
        </ValueNumberType>
      </DividendsPerYearResult>
    </GetDividendsPerYear_Response_1>
  </Body>
</Envelope>

```

Element	Description
LipperId	The asset's Lipper ID.
Value	The value showing the number of times the specified asset is expected to pay dividends per year.

24.4.30 Get Domiciles (GetDomiciles_1)

You can use the GetDomiciles_1 method to retrieve the domicile details, such as domicile name and code, for the given asset (s).

A domicile is the jurisdiction under which a fund is legally incorporated.

The example below gets domiciles details for the assets with '60003333' and '60003331' LipperIDs displayed in English

language.

XML Sample Request - Getting Domiciles

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetDomiciles_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetDomiciles_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <lipperIDs>
        <int>60003333</int>
        <int>60003331</int>
      </lipperIDs>
      <language>English</language>
    </GetDomiciles_Request_1>
  </Body>
</Envelope>
```

Parameter	Description
lipperID	A unique eight- or nine-digit number that identifies an asset.
language	The display language for the returned data.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

The response returns the domicile details for the specified assets:

XML Sample Response - Getting Domiciles

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetDomiciles_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetDomiciles_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <DomicilesResult>
        <DomicileType>
          <LipperId>60003333</LipperId>
          <Language>English</Language>
          <DomicileId>310</DomicileId>
          <DomicileCode>DUB</DomicileCode>
          <DomicileName>Dublin</DomicileName>
        </DomicileType>
        <DomicileType>
          <LipperId>60003331</LipperId>
          <Language>English</Language>
          <DomicileId>310</DomicileId>
          <DomicileCode>DUB</DomicileCode>
          <DomicileName>Dublin</DomicileName>
        </DomicileType>
      </DomicilesResult>
    </GetDomiciles_Response_1>
  </s:Body>
</s:Envelope>
```



```
</GetDomiciles_Response_1>
</Body>
</Envelope>
```

Element	Description
LipperId	The asset's Lipper ID.
Language	The display language for the domicile information.
DomicileId	The numerical Domicile ID (e.g., 345) that represents the asset's domicile.
DomicileCode	The alphabetic Domicile Code (e.g., GBR) that represents the asset's domicile.
DomicileName	The name of the domicile.

24.4.31 Get EU Tax Directive (GetEUTaxDirective_1)

You can use the GetEUTaxDirective_1 method to retrieve EU tax directive information for the given asset(s).

The EU Tax Directive applies only to bank interest, bond interest, and analogous income, such as income from bond funds, money-market funds, loans and mortgages. The example below gets EU tax directive data for the asset with '60003333' LipperID displayed in English language:

XML Sample Request - Getting EU Tax Directive

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetEUTaxDirective_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetEUTaxDirective_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <lipperIDs>
        <int>60003333</int>
      </lipperIDs>
      <language>English</language>
    </GetEUTaxDirective_Request_1>
  </Body>
</Envelope>
```

Parameter	Description
lipperID	A unique eight- or nine-digit number that identifies an asset.
language	The display language for the returned data.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

The response returns the EU tax directive information for the specified assets:

XML Sample Response - Getting EU Tax Directive

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetEUTaxDirective_1_Reply</a:Action>
```



```

<CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <Date>2009-04-17T10:41:48.639875Z</Date>
  <DoNotStore />
</CacheResponse>
<a:RelatesTo>[MessageID]</a:RelatesTo>
</s:Header>
<s:Body>
  <GetEUTaxDirective_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
    <EUTaxDirectiveResult>
      <EUTaxDirectiveType>
        <LipperId>60003333</LipperId>
        <Language>English</Language>
        <StartDate>2001-04-30</StartDate>
        <EndDate>2002-04-30</EndDate>
        <DirectiveStatus>Out of Scope</DirectiveStatus>
        <Directive15PercentThreshold>false</Directive15PercentThreshold>
        <Directive40PercentThreshold>false</Directive40PercentThreshold>
        <NonGrandfatheredHoldings xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
        <Prospectus_Vs_AssetAllocation>false</Prospectus_Vs_AssetAllocation>
        <NavTIIA>false</NavTIIA>
        <DividendTIIA>false</DividendTIIA>
        <KGTypeFunds>false</KGTypeFunds>
        <SwissFundsExBankAffidavit>false</SwissFundsExBankAffidavit>
      </EUTaxDirectiveType>
    </EUTaxDirectiveResult>
  </GetEUTaxDirective_Response_1>
</Body>
</Envelope>

```

Element	Description
LipperId	The asset's Lipper ID.
Language	The display language for the EU tax directive information.
StartDate	The start date of the EU tax directive information.
EndDate	The end date of the EU tax directive information.
DirectiveStatus	The asset's EU tax directive status. EU Tax Directive Status refers to the scope of the Tax Directive - for example, a fund may be declared "in-scope taxable" and based on the fund domicile's specific legislation, a tax will be levied.
Directive15PercentThreshold	A flag that indicates if this fund invests less than (or equal to) 15% of the fund's assets in debt claims with non-grandfathered status.
Directive40PercentThreshold	A flag that indicates if this fund invests less than (or equal to) 40% of the fund's assets in debt claims with non-grandfathered status.
NonGrandfatheredHoldings	The percentage of this fund's assets invested in debt claims with non-grandfathered status.
Prospectus_Vs_AssetAllocation	A value indicating whether [prospectus_ VS_ asset allocation].
NavTIIA	A flag that indicates if the fund is calculating the amount of taxable interest income within the daily net asset value (NAV).
DividendTIIA	A flag that indicates if the fund is calculating the amount of taxable interest income per dividend distribution.
KGTypeFunds	A value indicating whether [KG type funds].
SwissFundsExBankAffidavit	A value indicating whether [swiss funds ex bank affidavit].

24.4.32 Get Event (GetEvent_1)

You can use the GetEvent_1 method to retrieve information about the events stored in the Lipper database for the given asset (s). Events include bonus issues, factors, capital gains payments, capital repayments, stock splits, dividend payments, rights issues, and splits.

The example below retrieves events information for the asset with '68038421' LipperID.



XML Sample Request - Getting Events

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetEvent_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetEvent_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <lipperIDs>
        <int>68038421</int>
      </lipperIDs>
      <language>English</language>
    </GetEvent_Request_1>
  </Body>
</Envelope>

```

Parameter	Description
lipperID	A unique eight- or nine-digit number that identifies an asset.
language	The display language for the returned list.

The response returns the event information for the specified asset(s):

XML Sample Response - Getting Events

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetEvent_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetEvent_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
      <EventResult>
        <EventType>
          <LipperId>68038421</LipperId>
          <EventList>
            <EventItem>
              <DataDate>2011-05-31</DataDate>
              <Language>English</Language>
              <CapitalEventId>414</CapitalEventId>
              <CapitalEvent>Repayment</CapitalEvent>
            </EventItem>
            ....
            <EventItem>
              <DataDate>2009-12-30</DataDate>
              <Language>English</Language>
              <CapitalEventId>414</CapitalEventId>
              <CapitalEvent>Repayment</CapitalEvent>
            </EventItem>
          </EventList>
        </EventType>
      </EventResult>
    </GetEvent_Response_1>
  </Body>
</Envelope>

```



Element	Description
LipperId	The asset's Lipper ID.
EventList	A list of EventItem that contains the asset's events. Contains the following elements: • DataDate - the date of the event. • Language - the Language that represents the language for the event data. • CapitalEventId - the numeric event ID. • CapitalEvent - the name of the event, such as Factor or Split, among others.

24.4.33 Get Flags (GetFlags_1)

You can use the GetFlags_1 method to retrieve the available flags for the given asset(s). A flag's value is either true or false. There are a large number of flags available in the Lipper database, but not all flags apply for all assets.

A flag represents an attribute that Lipper has assigned to the asset.

The example below gets all flags for the asset with '60003333' LipperID displayed in English language:

XML Sample Request - Getting Flags

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetFlags_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetFlags_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <lipperIDs>
        <int>60003333</int>
      </lipperIDs>
      <language>English</language>
    </GetFlags_Request_1>
  </Body>
</Envelope>
```

Parameter	Description
lipperID	A unique eight- or nine-digit number that identifies an asset.
language	The display language for the returned data.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

The response returns all of the flags for the specified asset:

XML Sample Response - Getting Flags

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetFlags_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
  </s:Header>
  <s:Body>
    <GetFlags_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <lipperIDs>
        <int>60003333</int>
      </lipperIDs>
      <language>English</language>
      <Flags>
        <Flag>
          <Name>Factor</Name>
          <Value>true</Value>
        </Flag>
        <Flag>
          <Name>Split</Name>
          <Value>false</Value>
        </Flag>
      </Flags>
    </GetFlags_Response_1>
  </s:Body>
</s:Envelope>
```



<pre> </CacheResponse> <a:RelatesTo>[MessageID]</a:RelatesTo> </s:Header> <s:Body> <GetFlags_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1"> <FlagsResult> <FlagType> <LipperId>60003333</LipperId> <Language>English</Language> <FlagList> <FlagItem> <FlagId>1340</FlagId> <FlagName>Hedged</FlagName> <FlagCode>Y</FlagCode> <FlagValue>Yes</FlagValue> </FlagItem> <FlagItem> <FlagId>1350</FlagId> <FlagName>UCITS</FlagName> <FlagCode>Y</FlagCode> <FlagValue>Yes</FlagValue> </FlagItem> ... <FlagItem> <FlagId>5400</FlagId> <FlagName>SG - Sophisticated Fund</FlagName> <FlagCode>Y</FlagCode> <FlagValue>Yes</FlagValue> </FlagItem> </FlagList> </FlagType> </FlagsResult> </GetFlags_Response_1> </Body> </Envelope> </pre>

Element	Description
LipperId	The asset's Lipper ID.
Language	The display language for the flag list.
FlagList	The asset's list of flags and values. A flag represents an attribute that Lipper has assigned to the asset. Contains the following elements: • FlagId - the numeric flag ID. • FlagName - the name of the flag. • FlagCode - the alphabetic flag code. • FlagValue - the flag value, which is either Yes or No. If the value of this flag is yes, then the fund is listed on an exchange.

24.4.34 Get Flags Basic (GetFlagsBasic_1)

You can use the GetFlagsBasic_1 method to retrieve the available flags for the given asset(s). A flag's value is either true or false. There are a large number of flags available in the Lipper database, but not all flags apply for all assets.

A flag represents an attribute that Lipper has assigned to the asset.

The example below gets all flags for the asset with '60003333' LipperID displayed in English language:

XML Sample Request - Getting Flags Basic
<pre> <Envelope xmlns="http://www.w3.org/2003/05/soap-envelope"> <Header> <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To> <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID> <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetFlagsBasic_1</Action> <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1"> <ApplicationID>[AppID]</ApplicationID> </Authorization> </Header> <Body> ... </Body> </Envelope> </pre>



```

    <Token>[service token]</Token>
  </Authorization>
</Header>
<Body>
  <GetFlagsBasic_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
    <lipperIDs>
      <int>60003333</int>
    </lipperIDs>
    <language>English</language>
  </GetFlagsBasic_Request_1>
</Body>
</Envelope>

```

Parameter	Description
lipperID	A unique eight- or nine-digit number that identifies an asset.
language	The display language for the returned data.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

The response returns all of the flags for the specified asset:

XML Sample Response - Getting Flags Basic

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetFlagsBasic_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetFlagsBasic_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <FlagsResult>
        <FlagType>
          <LipperId>60003333</LipperId>
          <Language>English</Language>
          <FlagList>
            <FlagItem>
              <FlagId>5400</FlagId>
              <FlagName>SG - Sophisticated Fund</FlagName>
              <FlagCode>Y</FlagCode>
              <FlagValue>Yes</FlagValue>
            </FlagItem>
          </FlagList>
        </FlagType>
      </FlagsResult>
    </GetFlagsBasic_Response_1>
  </s:Body>
</Envelope>

```

Element	Description
LipperId	The asset's Lipper ID.
Language	The display language for the flag list.
FlagList	The asset's list of flags and values. A flag represents an attribute that Lipper has assigned to the asset. Contains the following elements: • FlagId - the numeric flag ID. • FlagName - the name of the flag. • FlagCode - the alphabetic flag code. • FlagValue - the flag value, which is either Yes or No. If the value of this flag is yes, then the fund is listed



on an exchange.

24.4.35 Get Flags Advanced (GetFlagsAdvanced_1)

You can use the GetFlagsAdvanced_1 method to retrieve the available flags for the given asset(s). A flag's value is either true or false. There are a large number of flags available in the Lipper database, but not all flags apply for all assets.

A flag represents an attribute that Lipper has assigned to the asset.

The example below gets all flags for the asset with '60003333' LipperID displayed in English language:

XML Sample Request - Getting Flags Advanced

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetFlagsAdvanced_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetFlagsAdvanced_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <lipperIDs>
        <int>60003333</int>
      </lipperIDs>
      <language>English</language>
    </GetFlagsAdvanced_Request_1>
  </Body>
</Envelope>
```

Parameter	Description
lipperID	A unique eight- or nine-digit number that identifies an asset.
language	The display language for the returned data.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

The response returns all of the flags for the specified asset:

XML Sample Response - Getting Flags Advanced

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetFlagsAdvanced_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetFlagsAdvanced_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <FlagsResult>
        <FlagType>
          <LipperId>60003333</LipperId>
          <Language>English</Language>
          <FlagList>
```



```

    </FlagList>
    </FlagType>
    </FlagsResult>
    </GetFlagsAdvanced_Response_1>

  </Body>
</Envelope>

```

Element	Description
LipperId	The asset's Lipper ID.
Language	The display language for the flag list.
FlagList	The asset's list of flags and values. A flag represents an attribute that Lipper has assigned to the asset. Contains the following elements: • FlagId - the numeric flag ID. • FlagName - the name of the flag. • FlagCode - the alphabetic flag code. • FlagValue - the flag value, which is either Yes or No. If the value of this flag is yes, then the fund is listed on an exchange.

24.4.36 Get IPO Info (GetIPOInfo_1)

You can use the GetIPOInfo_1 method to retrieve Initial Public Offering (IPO) data, such as IPO date and value, for the given asset(s).

IPO - Initial Public Offering is when a company issues company's stock or shares to the public or interested investors.

The example below gets IPO data for the asset with '60003333' LipperID expressed in US dollars and displayed in English language.

XML Sample Request - Getting IPO Information

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetIPOInfo_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetIPOInfo_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <lipperIDs>
        <int>60003333</int>
      </lipperIDs>
    </GetIPOInfo_Request_1>
  </Body>
</Envelope>

```

Parameter	Description
lipperID	A unique eight- or nine-digit number that identifies an asset.

The response returns IPO information for the specified asset ('60003333'):

XML Sample Response - Getting IPO Information

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetIPOInfo_1_Reply</

```



```

a:Action>
<CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <Date>2009-04-17T10:41:48.639875Z</Date>
  <DoNotStore />
</CacheResponse>
<a:RelatesTo>[MessageID]</a:RelatesTo>
</s:Header>
<s:Body>
  <GetIPOInfo_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
    <IPOInfoResult>
      <IPOInfoType>
        <LipperId>60003333</LipperId>
        <LaunchDate>2000-03-31</LaunchDate>
        <CurrencyCode>EUR</CurrencyCode>
        <IPOValue>10</IPOValue>
        <IPODate>2000-03-31</IPODate>
        <Nav>10</Nav>
        <Bid xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
        <Offer xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
        <Mid xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
      </IPOInfoType>
    </IPOInfoResult>
  </GetIPOInfo_Response_1>
</Body>
</Envelope>

```

Element	Description
LipperId	The asset's Lipper ID.
LaunchDate	The fund's launch date, which is the date that the subscription period for the fund ends.
CurrencyCode	The currency of the fund's base IPO currency.
IPOValue	The share value of the fund on the IPO date.
IPODate	The date of the fund's IPO.
Nav	The share value at the fund's first valuation with any shareholders.
Bid	The Bid value, which is the first pricing of the fund after the subscription period is over minus the fund's redemption fees.
Offer	The launch offer, which is the first pricing of the fund after the subscription period is over plus the fund's initial sales charge.
Mid	The fund's first mid pricing after the subscription period is over (i.e., the mid-point between the bid and the offer).

24.4.37 Get Launch Info (GetLaunchInfo_1)

You can use the GetLaunchInfo_1 method to retrieve launch date for the given asset(s).

The example below gets launch dates for the specified assets:

XML Sample Request - Retrieving Launch Dates

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetLaunchInfo_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetLaunchInfo_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">

```



```

    <lipperIDs>
      <int>60003332</int>
      <int>65028707</int>
      <int>60003333</int>
      <int>40051822</int>
      <int>19074010</int>
      <int>63500868</int>
      <int>63500547</int>
    </lipperIDs>
  </GetLaunchInfo_Request_1>
</Body>
</Envelope>

```

Parameter	Description
lipperID	A unique eight- or nine-digit number that identifies an asset.

The response returns IPO information for the specified asset ('60003333'):

XML Sample Response - Retrieving Launch Dates

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/
    GetLaunchInfo_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetLaunchInfo_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <LaunchInfoResult>
        <LaunchInfoType>
          <LipperId>19074010</LipperId>
          <LaunchPrice>
            <DataDate>1987-11-03</DataDate>
            <CurrencyCode>GBP</CurrencyCode>
            <Nav xsi:nil="true"/>
            <NavEstimated xsi:nil="true"/>
            <Offer xsi:nil="true"/>
            <OfferEstimated xsi:nil="true"/>
            <Bid xsi:nil="true"/>
            <BidEstimated xsi:nil="true"/>
            <Mid>100</Mid>
            <MidEstimated xsi:nil="true"/>
          </LaunchPrice>
          <FiscalDate xsi:nil="true"/>
        </LaunchInfoType>
        ...
        <LaunchInfoType>
          <LipperId>65028707</LipperId>
          <LaunchPrice>
            <DataDate>2006-04-24</DataDate>
            <CurrencyCode>KRW</CurrencyCode>
            <Nav>1000</Nav>
          ...
        </LaunchInfoType>
      </LaunchInfoResult>
    </GetLaunchInfo_Response_1>
  </s:Body>
</Envelope>

```

Element	Description
LipperId	The asset's Lipper ID.



LaunchPrice	The fund's launch price details. Contains the following elements: • DataDate - The fund's launch date, which is the date when the subscription period for the fund ends. • CurrencyCode - the currency of the fund's base IPO currency. • Nav - the share value at the fund's first valuation with any shareholders. • NavEstimated - indicates if a calculated net asset value price was not supplied by the data provider so that an estimated value was used instead. • Offer - the launch offer, which is the first pricing of the fund after the subscription period is over plus the fund's initial sales charge. • Bid - the Bid value, which is the first pricing of the fund after the subscription period is over minus the fund's redemption fees. • Mid - the fund's first mid pricing after the subscription period is over (i.e., the mid-point between the bid and the offer). • MidEstimated - indicates if a calculated mid value was not supplied by the data provider so that an estimated value was used instead.

24.4.38 Get Legal Structure (GetLegalStructure_1)

You can use the GetLegalStructure_1 method to retrieve information about the legal structure (name, code, and ID) to which the given assets conform.

A legal structure is an attribute of the asset and represents the way the asset has been formed for operation.

The example below gets legal structure information in English language for the asset with '60003333' LipperID.

XML Sample Request - Getting Legal Structure

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetLegalStructure_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetLegalStructure_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <lipperIDs>
        <int>60003333</int>
      </lipperIDs>
      <language>English</language>
    </GetLegalStructure_Request_1>
  </Body>
</Envelope>
```

Parameter	Description
lipperID	A unique eight- or nine-digit number that identifies an asset.
language	The display language for the returned data.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

The response returns legal structure data for the specified asset ('60003333'):

XML Sample Response - Getting Legal Structure

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/
```



```

GetLegalStructure_1_Reply</a:Action>
<CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <Date>2009-04-17T10:41:48.639875Z</Date>
  <DoNotStore />
</CacheResponse>
<a:RelatesTo>[MessageID]</a:RelatesTo>
</s:Header>
<s:Body>
  <GetLegalStructure_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
    <LegalStructureResult>
      <LegalStructureType>
        <LipperId>60003333</LipperId>
        <Language>English</Language>
        <LegalStructureId>1129</LegalStructureId>
        <LegalStructureCode>VCIC</LegalStructureCode>
        <LegalStructureName>ICVC</LegalStructureName>
      </LegalStructureType>
    </LegalStructureResult>
  </GetLegalStructure_Response_1>
</Body>
</Envelope>

```

Element	Description
LipperId	The asset's Lipper ID.
Language	The display language for the legal structure information.
LegalStructureId	The legal structure numeric ID.
LegalStructureCode	The legal structure alphabetic code.
LegalStructureName	The name of the legal structure.

24.4.39 Get Lipper Leader Scores (GetLipperLeaderScores_1)

You can use the GetLipperLeaderScores_1 method to retrieve Lipper Leader Scores for the given asset(s) based on the universe and data date.

The example below gets Lipper Leader Scores for the asset with '60087648' LipperID based on 'INTL' universe and the specified date:

XML Sample Request - Getting Lipper Leader Scores

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetLipperLeaderScores_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetLipperLeaderScores_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <lipperIDs>
        <int>60087648</int>
      </lipperIDs>
      <universeCode>INTL</universeCode>
      <dataDate>2009-03-27T00:00:00Z</dataDate>
    </GetLipperLeaderScores_Request_1>
  </Body>
</Envelope>

```



Parameter	Description
lipperID	A unique eight- or nine-digit number that identifies an asset.
universeCode	The code that represents the Universe, for which the Lipper Leader Scores will be returned. For the list of available Universes, see the Universe Enumeration section in the Lipper Data Enumerations chapter.
dataDate	The date for which Lipper Leader score data will be returned.

Note: Lipper Leader Scores are derived from highly sophisticated formulas that analyze funds against clearly defined criteria. Funds are compared to similar funds, and only those that truly stand out are awarded Lipper Leader status. There are five Lipper Leader Score Categories: Consistent Return, Expense, Preservation, Tax Efficiency, and Total Return. For each of these categories, there are three year, five year, ten year, and overall scores. Funds are rated on a numeric scale of 5 to 1; 5 represents funds with the highest rating, and 1 represents the lowest rating.

The response returns Lipper Leader Scores for the specified asset:

XML Sample Response - Getting Lipper Leader Scores

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/
    GetLipperLeaderScores_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetLipperLeaderScores_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <LipperLeaderScoresResult>
        <LipperLeaderScoresType>
          <LipperId>60087648</LipperId>
          <PublishedDate xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
          <DataDate>2005-03-31</DataDate>
          <LipperLeaderUniverseId>5680</LipperLeaderUniverseId>
          <ConsistentReturnOverallScore>5</ConsistentReturnOverallScore>
          <ConsistentReturnCount>10035</ConsistentReturnCount>
          <ConsistentReturn3YrScore>5</ConsistentReturn3YrScore>
          <ConsistentReturn3YrCount>10035</ConsistentReturn3YrCount>
          <ConsistentReturn5YrScore xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
          <ConsistentReturn5YrCount>5871</ConsistentReturn5YrCount>
          <ConsistentReturn10YrScore xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
          <ConsistentReturn10YrCount>1780</ConsistentReturn10YrCount>
          <ExpenseOverallScore xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
          <ExpenseCount xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
          <Expense3YrScore xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
          <Expense3YrCount xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
          <Expense5YrScore xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
          <Expense5YrCount xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
          <Expense10YrScore xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
          <Expense10YrCount xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
          <PreservationOverallScore>3</PreservationOverallScore>
          <PreservationCount>10194</PreservationCount>
          <Preservation3YrScore>3</Preservation3YrScore>
          <Preservation3YrCount>10194</Preservation3YrCount>
          <Preservation5YrScore>3</Preservation5YrScore>
          <Preservation5YrCount>6049</Preservation5YrCount>
          <Preservation10YrScore xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
          <Preservation10YrCount>1922</Preservation10YrCount>
          <TaxEfficiencyCount xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
          <TaxEfficiencyOverallScore xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
          <TaxEfficiency3YrScore xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
          <TaxEfficiency3YrCount xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
          <TaxEfficiency5YrScore xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
          <TaxEfficiency5YrCount xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
          <TaxEfficiency10YrScore xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
          <TaxEfficiency10YrCount xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
          <TotalReturnOverallScore>5</TotalReturnOverallScore>
          <TotalReturnCount>10035</TotalReturnCount>
          <TotalReturn3YrScore>5</TotalReturn3YrScore>
        </LipperLeaderScoresType>
      </LipperLeaderScoresResult>
    </s:Body>
  </s:Envelope>
```



```

<TotalReturn3yrCount>10035</TotalReturn3yrCount>
<TotalReturn5yrScore xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
<TotalReturn5yrCount>5871</TotalReturn5yrCount>
<TotalReturn10yrScore xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
<TotalReturn10yrCount>1780</TotalReturn10yrCount>
</LipperLeaderScoresType>
</LipperLeaderScoresResult>
</GetLipperLeaderScores_Response_1>

```

```

</Body>
</Envelope>

```

Element	Description
LipperId	The asset's Lipper ID.
PublishedDate	The date the Lipper Leader Score was published.
DataDate	The date for which data will be returned.
LipperUniverseId	The Universe ID for which the Lipper Leader score is applicable.
ConsistentReturnOverallScore	The Consistent Return overall score.
ConsistentReturnCount	The Consistent Return count.
ConsistentReturn3yrScore	The Consistent Return 3 Year score.
ConsistentReturn3yrCount	The Consistent Return 3 Year count.
ConsistentReturn5yrScore	The Consistent Return 5 Year score.
ConsistentReturn5yrCount	The Consistent Return 5 Year count.
ConsistentReturn10yrScore	The Consistent Return 10 Year score.
ConsistentReturn10yrCount	The Consistent Return 10 Year count.
ExpenseOverallScore	The Expense overall score.
ExpenseCount	The Expense count.
Expense3yrScore	The Expense 3 Year score.
Expense3yrCount	The Expense 3 Year count.
Expense5yrScore	The Expense 5 Year score.
Expense5yrCount	The Expense 5 Year count.
Expense10yrScore	The Expense 10 Year score.
Expense10yrCount	The Expense 10 Year count.
PreservationOverallScore	The Preservation overall score.
PreservationCount	The Preservation count.
Preservation3yrScore	The Preservation 3 Year score.
Preservation3yrCount	The Preservation 3 Year count.
Preservation5yrScore	The Preservation 5 Year score.
Preservation5yrCount	The Preservation 5 Year count.
Preservation10yrScore	The Preservation 10 Year score.



Preservation10yr Count	The Preservation 10 Year count.
TaxEfficiencyCou nt	The Tax Efficiency count.
TaxEfficiencyOve rallScore	The Tax Efficiency overall score.
TaxEfficiency3yr Score	The Tax Efficiency 3 Year score.
TaxEfficiency3yr Count	The Tax Efficiency 3 Year count.
TaxEfficiency5yr Score	The Tax Efficiency 5 Year score.
TaxEfficiency5yr Count	The Tax Efficiency 5 Year count.
TaxEfficiency10y rScore	The Tax Efficiency 10 Year score.
TaxEfficiency10y rCount	The Tax Efficiency 10 Year count.
TotalReturnOver allScore	The Total Return overall score.
TotalReturnCoun t	The Total Return count.
TotalReturn3yrSc ore	The Total Return 3 Year score.
TotalReturn3yrC ount	The Total Return 3 Year count.
TotalReturn5yrSc ore	The Total Return 5 Year score.
TotalReturn5yrC ount	The Total Return 5 Year count.
TotalReturn10yr Score	The Total Return 10 Year score.
TotalReturn10yr Count	The Total Return 10 Year count.

1. **The Lipper Rating for Consistent Return** identifies a fund that has provided relatively superior consistency and risk-adjusted returns when compared to a group of similar funds.
2. **The Lipper Rating for Expense** identifies a fund that has successfully managed to keep its expenses low relative to its peers and within its load structure.
3. **Preservation** is a fund that has demonstrated a superior ability to preserve capital in a variety of markets when compared with other funds in its asset class.
4. **Tax Efficiency** identifies a fund that has been successful at deferring taxes over the measurement period relative to similar funds.
5. **Total Return** denotes a fund that has provided superior total returns (income from dividends and interest as well as capital appreciation) when compared to a group of similar funds.

24.4.40 Get Minimum Investment (GetMinimumInvestment_1)

You can use the GetMinimumInvestment_1 method to retrieve minimum investment data for the given asset(s). Minimum investment data includes minimum regular investment, minimum irregular investment, minimum investment, and minimum initial share investment.

The example below gets minimum investment information for the asset with '60003333' LipperID:

XML Sample Request - Getting Minimum Investment

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
```



```

<Header>
  <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
  <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
  <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetMinimumInvestment_1</Action>
  <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
    <ApplicationID>[AppID]</ApplicationID>
    <Token>[service token]</Token>
  </Authorization>
</Header>
<Body>
  <GetMinimumInvestment_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
    <lipperIDs>
      <int>60003333</int>
    </lipperIDs>
  </GetMinimumInvestment_Request_1>
</Body>
</Envelope>

```

Parameter	Description
lipperID	A unique eight- or nine-digit number that identifies an asset.

The response returns the minimum investment information for the specified asset ('60003333'):

XML Sample Response - Getting Minimum Investment

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetMinimumInvestment_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetMinimumInvestment_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <MinimumInvestmentResult>
        <MinimumInvestmentType>
          <LipperId>60003333</LipperId>
          <Language>English</Language>
          <StartDate xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
          <EndDate xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
          <CurrencyCode>EUR</CurrencyCode>
          <Name>Janus Global Life Sciences EUR A Acc</Name>
          <MinimumInvestmentTypeId>0</MinimumInvestmentTypeId>
          <MinimumInvestmentInitial>2500</MinimumInvestmentInitial>
          <MinimumInvestmentRegular xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
          <MinimumInvestmentIRRegular>100</MinimumInvestmentIRRegular>
          <MinimumInvestmentInitialShare xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
        </MinimumInvestmentType>
      </MinimumInvestmentResult>
    </GetMinimumInvestment_Response_1>
  </s:Body>
</Envelope>

```

Element	Description
LipperId	The asset's Lipper ID.
Language	The display language for the minimum investment data.
StartDate	The minimum investment start date.
EndDate	The minimum investment end date.
CurrencyCode	The currency code of the currency in which the minimum investment data is expressed.



Name	The name of the asset.
MinimumInvestmentTypeId	This is a simple numeric reference identifier used to identify various minimum investment types available through the service.
MinimumInvestmentTypeInitial	The minimum initial investment amount.
MinimumInvestmentTypeRegular	The minimum amount of investment that can be accepted on a regular basis, such as to be part of a regular savings plan.
MinimumInvestmentTypeIRRegular	The minimum number of shares or currency amount that investors can subsequently invest in the fund (on an ad hoc basis) after purchasing initial shares.
MinimumInvestmentTypeInitialShare	The minimum initial share investment amount.

24.4.41 Get Newly Available Funds by RFS (GetNewlyAvailableFundsByRfs_1)

You can use the GetNewlyAvailableFundsByRfs_1 method to retrieve the asset(s) that are new to the Lipper database for the specified country since the given inception date.

The example below gets new funds in English language added since the specified inception date:

XML Sample Request - Getting Newly Available Funds by RFS	
<pre><Envelope xmlns="http://www.w3.org/2003/05/soap-envelope"> <Header> <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To> <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID> <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetNewlyAvailableFundsByRfs_1</Action> <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1"> <ApplicationID>[AppID]</ApplicationID> <Token>[service token]</Token> </Authorization> </Header> <Body> <GetNewlyAvailableFundsByRfs_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1"> <language>English</language> <inceptionDate>2011-01-12T00:00:00</inceptionDate> <rfs>None</rfs> </GetNewlyAvailableFundsByRfs_Request_1> </Body> </Envelope></pre>	

Parameter	Description
language	The language for the displayed asset.
inceptionDate	The date when asset was added to the Lipper database.
rfs	The country code for which new assets were added. See section Countries Enumeration in the Lipper Data Enumerations chapter for the full list of available country codes.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

The response returns the asset(s) that are new to the Lipper database since the given inception date:

XML Sample Response - Getting Newly Available Funds by RFS	
<pre><s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing"> <s:Header> <a:Action mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetNewlyAvailableFundsByRfs_1_Reply</a:Action> <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema"> <Date>2009-04-17T10:41:48.639875Z</Date> </CacheResponse> </s:Header> <s:Body> <GetNewlyAvailableFundsByRfs_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1"> <Assets> <Asset> <Name>[Asset Name]</Name> <MinimumInvestmentType>[MinimumInvestmentType]</MinimumInvestmentType> <InitialInvestment>[InitialInvestment]</InitialInvestment> <RegularInvestment>[RegularInvestment]</RegularInvestment> <IRInvestment>[IRInvestment]</IRInvestment> <InitialShareInvestment>[InitialShareInvestment]</InitialShareInvestment> </Asset> </Assets> </GetNewlyAvailableFundsByRfs_Response_1> </s:Body> </s:Envelope></pre>	



```

    <DoNotStore />
  </CacheResponse>
  <a:RelatesTo>[MessageID]</a:RelatesTo>
</s:Header>
<s:Body>
  <GetNewlyAvailableFundsByRfs_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
    <NewlyAvailableFundsByRfsResult>
      <AssetIdentityType>
        <LipperId>68082043</LipperId>
        <Language>English</Language>
        <Name>Allianz Volatility Strategy - IT - EUR</Name>
      </AssetIdentityType>
      <AssetIdentityType>
        <LipperId>68078223</LipperId>
        <Language>English</Language>
        <Name>Bualuang Thanarat 1/11</Name>
      </AssetIdentityType>
      ...
    </NewlyAvailableFundsByRfsResult>
  </GetNewlyAvailableFundsByRfs_Response_1>
</Body>
</Envelope>

```

Element	Description
LipperId	The asset's Lipper ID.
Language	The display language for the asset identity information.
Name	The full name of the asset.

24.4.42 Get Note (GetNote_1)

The GetNote_1 method allows the users to view a brief note such as fund objective or additional information on the requested fund.

XML Sample Request - Getting Note

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetNote_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetNote_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <lipperIDs>
        <int>60003333</int>
      </lipperIDs>
    </GetNote_Request_1>
  </Body>
</Envelope>

```

Parameter	Description
lipperID	A unique eight- or nine-digit number that identifies an asset.

The response returns the following data:

XML Sample Response - Getting Note



```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/
    GetNewlyAvailableFundsByRfs_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetNote_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1" xmlns:xsi="http://www.
    w3.org/2001/XMLSchema-instance">
      <NoteResult>
        <NoteType>
          <LipperId>60003333</LipperId>
          <NoteList>
            <NoteItem>
              <DataDate>2000-11-30</DataDate>
              <Type>GENERAL</Type>
              <Text>Name changed from Janus World Global Life Sciences A1 Euro</Text>
            </NoteItem>
            ....
            <NoteItem>
              <DataDate>2006-10-09</DataDate>
              <Type>FUND_OBJECTIVE</Type>
              <Text>The Fund seeks long-term growth of capital by investing primarily in life-science equity securities of companies
              located anywhere in the world and selected for their growth potential.</Text>
            </NoteItem>
            ....
            <NoteItem>
              <DataDate>2008-07-30</DataDate>
              <Type>FUND_OBJECTIVE</Type>
              <Text>Long-term growth of capital. It pursues its objective by investing primarily in equity securities of companies located
              anywhere in the world and selected for their growth potential.The Fund will invest Primarily in securities of companies that
              the relevant Sub-Investment Adviser believes have a life sciences orientation. Generally speaking, the life sciences relate to
              maintaining or improving quality of life.Thus, companies with a life sciences orientation include companies engaged in
              research, development, production or distribution of products or services related to health and personal care, medicine or
              pharmaceuticals.</Text>
            </NoteItem>
            ...
          </NoteList>
        </NoteType>
      </NoteResult>
    </GetNote_Response_1>
  </Body>
</Envelope>

```

Element	Description
LipperId	The asset's Lipper ID.
NoteList	Contains asset's note data as a list of <NoteItem> elements, which have the following elements: • DataDate - date when note was added. • Type - defines note type. • Text - shows note text.

24.4.43 Get Portfolio Asset Details IM (GetPortfolioAssetDetailsIM_1)

The example below gets Portfolio Asset Details for the specified assets:

XML Sample Request - Getting Portfolio Asset Details IM

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
  </Header>
  <Body>
    <GetPortfolioAssetDetailsIM_1>
      <AssetId>[Asset ID]</AssetId>
    </GetPortfolioAssetDetailsIM_1>
  </Body>
</Envelope>

```



```

<Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/
LipperFundamentals_1/GetPortfolioAssetDetailsIM_1</Action>
<Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
  <ApplicationID>[AppID]</ApplicationID>
  <Token>[service token]</Token>
</Authorization>
</Header>
<Body>
  <GetPortfolioAssetDetailsIM_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
    <lipperIds>
      <int>40045581</int>
      <int>40019000</int>
      <int>40002454</int>
      <int>40052684</int>
      <int>40059914</int>
      <int>40124431</int>
    </lipperIds>
    <periods>
      <PeriodType>
        <BeginDate>2010-02-24T00:00:00Z</BeginDate>
        <EndDate>2011-02-24T00:00:00Z</EndDate>
      </PeriodType>
    </periods>
  </GetPortfolioAssetDetailsIM_Request_1>
</Body>
</Envelope>

```

Parameter	Description
lipperID	A unique eight- or nine-digit number that identifies an asset.
PeriodType	Shows the beginning and end dates of the period.

The response returns :

XML Sample Response - Getting Portfolio Asset Details IM

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/
    GetPortfolioAssetDetailsIM_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetPortfolioAssetDetailsIM_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <PortfolioAssetDetailsResult>
        <PortfolioAssetDetailsType>
          <LipperId>40002454</LipperId>
          <PortfolioId>35530821</PortfolioId>
          <RequestedPeriod>
            <BeginDate>2010-02-24T00:00:00</BeginDate>
            <EndDate>2011-02-24T00:00:00</EndDate>
          </RequestedPeriod>
          <PortfolioAssetDetailsItems>
            <PortfolioAssetDetailsItem>
              <ItemId>GrossSales</ItemId>
              <ItemValue>0</ItemValue>
              <DataDate>2010-12-31</DataDate>
            </PortfolioAssetDetailsItem>
            <PortfolioAssetDetailsItem>
              <ItemId>GrossSalesRatio</ItemId>
              <ItemValue>0</ItemValue>
              <DataDate>2010-12-31</DataDate>
            </PortfolioAssetDetailsItem>
          </PortfolioAssetDetailsItems>
        </PortfolioAssetDetailsType>
      </PortfolioAssetDetailsResult>
    </GetPortfolioAssetDetailsIM_Response_1>
  </s:Body>
</s:Envelope>

```



<pre> <PortfolioAssetDetailsItem> <ItemId>Redemptions</ItemId> <ItemValue>0</ItemValue> <DataDate>2010-12-31</DataDate> </PortfolioAssetDetailsItem> <PortfolioAssetDetailsItem> <ItemId>RedemptionRatio</ItemId> <ItemValue>0</ItemValue> <DataDate>2010-12-31</DataDate> </PortfolioAssetDetailsItem> </PortfolioAssetDetailsItems> </PortfolioAssetDetailsType> ... </PortfolioAssetDetailsResult> </GetPortfolioAssetDetailsIM_Response_1> </Body> </Envelope> </pre>

Element	Description
LipperId	The asset's Lipper ID.
PortfolioId	The portfolio ID.
RequestedPeriod	The beginning and end dates of the requested period.
PortfolioAssetDetailsItem	Contains the following elements: ItemId contains the following items: - GrossSales - The actual amount of new receipts into a fund as of the fund's fiscal year-end. This information is retrieved directly from the fund's audited annual report. Totals are reported in millions. - GrossSalesRatio - Annual gross sales of a fund expressed as a percentage of Average Net Assets (ANA). - Redemptions - The actual amount of withdrawals out of a fund as of fiscal year-end. This information is retrieved directly from the fund's audited annual report. Totals are reported in millions. - RedemptionsRatio - Annual redemptions from a fund expressed as a percentage of Average Net Assets (ANA). ItemValue - The value for above mentioned items in the response. DataDate - Reporting Data is as on this date.

24.4.44 Get Portfolio Fund (GetPortfolioFund_1)

You can use the GetPortfolioFund_1 method to retrieve portfolio funds for the given asset(s).

The example below gets portfolio funds for the specified assets:

XML Sample Request - Getting Portfolio Fund
<pre> <Envelope xmlns="http://www.w3.org/2003/05/soap-envelope"> <Header> <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To> <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID> <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetPortfolioFund_1</Action> <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1"> <ApplicationID>[AppID]</ApplicationID> <Token>[service token]</Token> </Authorization> </Header> <Body> <GetPortfolioFund_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1"> <lipperIDs> <int>60003332</int> <int>65028707</int> <int>60003333</int> <int>40085510</int> <int>40051822</int> </lipperIDs> <language>Dutch</language> </GetPortfolioFund_Request_1> </Body> </Envelope> </pre>



```
</GetPortfolioFund_Request_1>
```

```
</Body>
</Envelope>
```

Description

A unique eight- or nine-digit number that identifies an asset.

The display language for the returned data.

The response returns IPO information for the specified asset ('60003333'):

XML Sample Response - Getting Portfolio Fund

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/
    GetPortfolioFund_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetPortfolioFund_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <PortfolioFundResult>
        <AssetParentType>
          <LipperId>40051822</LipperId>
          <Parent>
            <LipperId>35552333</LipperId>
            <Language>English</Language>
            <Name>Dreyfus Greater China Fund;A</Name>
          </Parent>
        </AssetParentType>
        <AssetParentType>
          <LipperId>60003333</LipperId>
          <Parent>
            <LipperId>35015062</LipperId>
            <Language>English</Language>
            <Name>Janus Global Life Sciences Fund</Name>
          </Parent>
        </AssetParentType>
        <AssetParentType>
          <LipperId>65028707</LipperId>
```



```

    <Parent>
      <LipperId>35187715</LipperId>
      <Language>English</Language>
      <Name>Hana UBS FC LG Elec / Samsung Fire Derivatives 1</Name>
    </Parent>
  </AssetParentType>
</PortfolioFundResult>
</GetPortfolioFund_Response_1>

</Body>
</Envelope>

```

Element	Description
LipperId	The asset's Lipper ID.
Parent	Details of the parent fund of which the asset is a member. Contains the following values: • LipperID - the fund's Lipper ID. • Language - the display language for the fund identity information. • Name - the full name of the fund.

24.4.45 Get Registered Countries Of Sale (GetRegisteredCountriesOfSale_1)

You can use the GetRegisteredCountriesOfSale_1 method to retrieve a list of the countries where the given assets are registered for sale.

The example below gets a list of countries displayed in English language for the asset with '60003333' LipperID:

XML Sample Request - Getting Registered Countries Of Sale

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetRegisteredCountriesOfSale_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetRegisteredCountriesOfSale_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <lipperIDs>
        <int>60003333</int>
      </lipperIDs>
      <language>English</language>
    </GetRegisteredCountriesOfSale_Request_1>
  </Body>
</Envelope>

```

Parameter	Description
lipperID	A unique eight- or nine-digit number that identifies an asset.
language	The display language for the returned data.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

The response returns the registered for sale information for the specified asset ('60003333'):

XML Sample Response - Getting Registered Countries Of Sale

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>

```



```

<a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/
GetRegisteredCountriesOfSale_1_Reply</a:Action>
<CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <Date>2009-04-17T10:41:48.639875Z</Date>
  <DoNotStore />
</CacheResponse>
<a:RelatesTo>[MessageID]</a:RelatesTo>
</s:Header>
<s:Body>
  <GetRegisteredCountriesOfSale_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
    <RegisteredCountriesOfSaleResult>
      <RegisteredCountryOfSaleType>
        <LipperId>60003333</LipperId>
        <CountryList>
          <CountryType>
            <CountryId>796</CountryId>
            <Language>English</Language>
            <CountryName>Austria</CountryName>
            <CountryCode>AUT</CountryCode>
          </CountryType>
          <CountryType>
            <CountryId>1004</CountryId>
            <Language>English</Language>
            <CountryName>United Kingdom</CountryName>
            <CountryCode>GBR</CountryCode>
          </CountryType>
          ...
          <CountryType>
            <CountryId>988</CountryId>
            <Language>English</Language>
            <CountryName>Taiwan</CountryName>
            <CountryCode>TWN</CountryCode>
          </CountryType>
          <CountryType>
            <CountryId>803</CountryId>
            <Language>English</Language>
            <CountryName>Belgium</CountryName>
            <CountryCode>BEL</CountryCode>
          </CountryType>
        </CountryList>
      </RegisteredCountryOfSaleType>
    </RegisteredCountriesOfSaleResult>
  </GetRegisteredCountriesOfSale_Response_1>
</Body>
</Envelope>

```

Element	Description
LipperId	The asset's Lipper ID.
CountryList	The list of countries where the asset is registered for sale. Contains the following elements: CountryId - the country's numerical Country ID. Language - the display language for the country information. CountryName - the name of the country. CountryCode - the alphabetic country code.

24.4.46 Get Registered Country Of Sale (GetRegisteredCountryOfSale_1)

You can use the GetRegisteredCountryOfSale_1 method to retrieve a flag that tells whether the given asset(s) is registered for sale in the given country.

The example below gets a flag showing whether the asset with '60003333' LipperID is registered for sale in France:

XML Sample Request - Getting Registered Country Of Sale

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>

```



```

<MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
<Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/
LipperFundamentals_1/GetRegisteredCountryOfSale_1</Action>
<Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
  <ApplicationID>[AppID]</ApplicationID>
  <Token>[service token]</Token>
</Authorization>
</Header>
<Body>
  <GetRegisteredCountryOfSale_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
    <lipperIDs>
      <int>60003333</int>
    </lipperIDs>
    <countryCode>FRA</countryCode>
  </GetRegisteredCountryOfSale_Request_1>
</Body>
</Envelope>

```

Parameter	Description
lipperID	A unique eight- or nine-digit number that identifies an asset.
countryCode	The country code that represents the country that is being validated. This method will determine whether the given lipperID is for sale in this country. For full listing of available country codes, see section Countries Enumeration in the Lipper Data Enumerations chapter.

The response returns a flag that indicates whether the given assets are registered for sale country represented by countryCode:

XML Sample Response - Getting Registered Country Of Sale

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/
GetRegisteredCountryOfSale_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetRegisteredCountryOfSale_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <RegisteredCountryOfSaleResult>
        <ValidationType>
          <LipperId>60003333</LipperId>
          <IsValid>true</IsValid>
        </ValidationType>
      </RegisteredCountryOfSaleResult>
    </GetRegisteredCountryOfSale_Response_1>
  </s:Body>
</Envelope>

```

Element	Description
LipperId	The Lipper ID for the asset's benchmark fund.
IsValid	The flag indicating whether this instance is true or false.

24.4.47 Get Successor Advanced (GetSuccessorAdvanced_1)

You can use the GetSuccessorAdvanced_1 method to retrieve the names of the surviving funds in a fund merger for the given asset(s).

The example below gets the name of the surviving fund for the given asset:



XML Sample Request - Getting Successor Advanced

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetSuccessorAdvanced_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetSuccessorAdvanced_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <lipperIDs>
        <int>40051822</int>
      </lipperIDs>
      <language>Dutch</language>
    </GetSuccessorAdvanced_Request_1>
  </Body>
</Envelope>

```

Parameter	Description
lipperID	A unique eight- or nine-digit number that identifies an asset.
language	The display language for the returned data.

The response returns successor information for the specified asset ('40051822'):

XML Sample Response - Getting Successor Advanced

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetSuccessorAdvanced_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetSuccessorAdvanced_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <SuccessorResult>
        <SuccessionType>
          <LipperId>40051822</LipperId>
          <Successor>
            <LipperId>40035795</LipperId>
            <Language>Dutch</Language>
            <Name>Dreyfus Greater China Fund;A</Name>
          </Successor>
          <SuccessionDate>2009-02-04</SuccessionDate>
        </SuccessionType>
      </SuccessorResult>
    </GetSuccessorAdvanced_Response_1>
  </Body>
</Envelope>

```

Element	Description
LipperId	The asset's Lipper ID.
Successor	The name of the surviving fund in a fund merger. Contains the following values: LipperID - the fund's Lipper ID. Language - the display language for the fund identity information.



	• Name - the full name of the fund.
Succession Date	The succession date.

24.4.48 Get Successor IM (GetSuccessorIM_1)

The GetSuccessorIM_1 method provides an unrestricted version of GetSuccessorAdvanced_1 and is available to Investment Management users.

The example below gets the name of the surviving fund for the given asset:

XML Sample Request - Getting Successor IM

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetSuccessorIM_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetSuccessorIM_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <lipperIDs>
        <int>40051822</int>
      </lipperIDs>
      <language>Dutch</language>
    </GetSuccessorIM_Request_1>
  </Body>
</Envelope>
```

Parameter	Description
lipperID	A unique eight- or nine-digit number that identifies an asset.
language	The display language for the returned data.

The response returns successor information for the specified asset ('40051822'):

XML Sample Response - Getting Successor IM

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetSuccessorIM_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetSuccessorIM_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <SuccessorResult>
        <SuccessionType>
          <LipperId>40051822</LipperId>
          <Successor>
            <LipperId>40035795</LipperId>
            <Language>Dutch</Language>
            <Name>Dreyfus Greater China Fund;A</Name>
          </Successor>
        </SuccessionType>
      </SuccessorResult>
    </GetSuccessorIM_Response_1>
  </s:Body>
</s:Envelope>
```



```

    <SuccessionDate>2009-02-04</SuccessionDate>
  </SuccessionType>
  </SuccessorResult>
</GetSuccessorIM_Response_1>

</Body>
</Envelope>

```

Element	Description
LipperId	The asset's Lipper ID.
Successor	The name of the surviving fund in a fund merger. Contains the following values: • LipperID - the asset's Lipper ID. • Language - the display language for the asset identity information. • Name - the full name of the asset.
Succession Date	The succession date.

24.4.49 Get Support Company (GetSupportCompany_1)

You can use the GetSupportCompany_1 method to retrieve company information for the given asset(s) and company role.

The example below gets company information in English language for the assets with '60003333' and '65028707' LipperIDs for the 'Administrator' company role alongside with contact information.

XML Sample Request - Getting Support Company

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetSupportCompany_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetSupportCompany_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <lipperIDs>
        <int>60003333</int>
        <int>65028707</int>
      </lipperIDs>
      <language>English</language>
      <companyRole>Administrator</companyRole>
      <provideContactInformation>true</provideContactInformation>
    </GetSupportCompany_Request_1>
  </Body>
</Envelope>

```

Parameter	Description
lipperID	A unique eight- or nine-digit number that identifies an asset.
language	The display language for the returned data.
companyRole	The company role for which support company information will be returned. A support company can have the following roles: • Administrator: the name of the company identified as the administrator, who provides back office support and compliance services to the fund. This may include maintaining financial records, furnishing statistical and research data, providing data processing, etc. • Custodian: the name of the company responsible for holding the assets (securities) of the mutual fund. • Insurer: the name of the Insurance Company that is marketing a variable product. • Portfolio Manager: the company responsible for managing the portfolio of investments on behalf of the fund manager.



	• Promoter: the company responsible for the marketing of the fund. It is usually the name of this company that is prefixed to the name of the fund. • Investment Advisor: the company responsible for actually managing the investment of the available funds. • Sub-Advisor: an entity that assists in the operation of the fund by providing services on behalf of the Investment Advisor.
provideContactInformation	If true contact information (phone number, address, etc.) for the company will be returned; if false, the contact information will not be included in the results.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

The response returns the company information for the specified assets and company role:

XML Sample Response - Getting Support Company

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/
    GetSupportCompany_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetSupportCompany_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <SupportCompanyResult>
        <SupportCompanyType>
          <Language>English</Language>
          <CompanyId>1272526</CompanyId>
          <CompanyFullName>Citi Fund Services (Ireland) Ltd</CompanyFullName>
          <LipperId>60003333</LipperId>
          <CompanyCode>105626158</CompanyCode>
          <CompanyShortName>Citi Fund Services Ltd</CompanyShortName>
          <BusinessName>Finance</BusinessName>
          <ContactInformation>
            <AddressLine1>Brooklawn House,</AddressLine1>
            <AddressLine2>Crampton Avenue /</AddressLine2>
            <AddressLine3>Shellbourne Road,</AddressLine3>
            <AddressLine4>Ballsbridge, Dublin 4</AddressLine4>
            <Telephone>+353 1 637 6300</Telephone>
            <Fax>+353 1 637 6400</Fax>
            <WebsiteUrl>
              <Fragment/>
              <Host>www.transactionservices.citigroup.com</Host>
              <Password/>
              <Path>/</Path>
              <Port>80</Port>
              <Query/>
              <Scheme>http</Scheme>
              <UserName/>
            </WebsiteUrl>
            <Uri>http://www.transactionservices.citigroup.com/</Uri>
            <Host>www.transactionservices.citigroup.com</Host>
          </ContactInformation>
        </SupportCompanyType>
        ...
      </SupportCompanyResult>
    </GetSupportCompany_Response_1>
  </s:Body>
</Envelope>
```

Element	Description
Language	The display language for the company information.
CompanyId	The company's numeric ID.



CompanyFullName	The full name of the company.
LipperId	The asset's Lipper ID.
CompanyCode	The company's alphabetic code.
CompanyShortName	The short name of the company.
BusinessName	The type of business in which the company engages.
ContactInformation	The company's contact information.

24.4.50 Get Top Performers (GetTopPerformers_1)

You can use the GetTopPerformers_1 method to retrieve the given country's best or top-performing funds.

The example below gets the top-performing funds for the USA expressed in US dollars and displayed in English language. The request is also configured to retrieve only 10 best funds and include hedge funds in the results.

XML Sample Request - Getting Top Performers

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetTopPerformers_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    GetTopPerformers_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <countryCode>
        <Countries>USA</Countries>
      </countryCode>
      <currencyCode>USD</currencyCode>
      <numberOfAssets>10</numberOfAssets>
      <language>English</language>
      <includeHedgeFunds>true</includeHedgeFunds>
    </GetTopPerformers_Request_1>
  </Body>
</Envelope>
```

Parameter	Description
Countries	The country for which the best performing funds should be returned. For full listing of available country codes, see section Countries Enumeration in the Lipper Data Enumerations chapter.
currencyCode	The display currency for the returned list. For full listing of available currency codes, see section Currency Code Enumeration in the Lipper Data Enumerations chapter.
numberOfAssets	The number of funds that should be included in the list of poorest performers.
language	The display language for the returned data.
includeHedgeFunds	If true, hedge funds will be included in the returned list of best performing funds; otherwise, hedge funds will not be included in the results. Hedge funds are investment funds open to a limited range of investors. A hedge fund allows more investment and trading activities than other investment funds and an investor pays a special performance fee to its investment manager.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

The response returns a list of <PerformerType> elements that contain the top-performing funds:



XML Sample Response - Getting Top Performers

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/
    GetTopPerformers_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetTopPerformers_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <TopPerformersResult>
        <PerformerType>
          <CountryCode>USA</CountryCode>
          <PerformerList>
            <PerformerItem>
              <LipperId>60047781</LipperId>
              <Language>English</Language>
              <FundShortName>Russian Opps Ltd</FundShortName>
              <PerfYTD>106.611</PerfYTD>
            </PerformerItem>
            <PerformerItem>
              <LipperId>40035798</LipperId>
              <Language>English</Language>
              <FundShortName>Dreyfus Greatr China;I</FundShortName>
              <PerfYTD>86.12433</PerfYTD>
            </PerformerItem>
            ...
            <PerformerItem>
              <LipperId>40106105</LipperId>
              <Language>English</Language>
              <FundShortName>Old Mutual:CF China;I</FundShortName>
              <PerfYTD>79.53796</PerfYTD>
            </PerformerItem>
          </PerformerList>
        </PerformerType>
      </TopPerformersResult>
    </GetTopPerformers_Response_1>
  </s:Body>
</Envelope>

```

Element	Description
CountryCode	The country code that represents the country to which the performance list pertains.
PerformerList	The list of the country's fund performance data. Contains the following elements: • LipperId - the asset's Lipper ID. • Language - the display language for the fund performance data. • FundShortName - the fund's short name. • PerfYTD - the asset's year-to-date performance value.

24.4.51 Get Top Performers By Classification Scheme (GetTopPerformersByClassificationScheme_1)

You can use the GetTopPerformersByClassificationScheme_1 method to retrieve the top, or best-performing funds (based on year-to-date performance) for the given classification scheme.

A classification is a designation assigned to assets based on various characteristics of the assets. For example, "Equity North America" is a classification assigned to an asset. Classifications are organized into classification schemes. Lipper offers or tracks multiple classification schemes around the world. For example, Equity North America is a classification within the Lipper Global Classification scheme.

The example below retrieves 10 best funds for the 'ABILIFE2008' classification scheme expressed in US dollars and displayed in



English language.

XML Sample Request - Getting Top Performers By Classification Scheme

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetTopPerformersByClassificationScheme_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetTopPerformersByClassificationScheme_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <classificationSchemeCode>ABILIFE2008</classificationSchemeCode>
      <language>English</language>
      <currencyCode>USD</currencyCode>
      <numberOfClasses>10</numberOfClasses>
      <calculationPeriodName>
        <CalculationTypeId>OneMonthPerformancetoLastMonthEnd</CalculationTypeId>
      </calculationPeriodName>
    </GetTopPerformersByClassificationScheme_Request_1>
  </Body>
</Envelope>
```

Parameter	Description
classificationSchemeCode	The classification scheme for which best-performing funds should be returned. See the list of available classification schemes in the Classification Scheme Enumeration section in the Lipper Data Enumerations chapter.
language	The display language for the returned list.
currencyCode	The display currency for the returned data. For full listing of available currency codes, see section Currency Code Enumeration in the Lipper Data Enumerations chapter.
numberOfClasses	The number of classes to include in the search results.
calculationPeriod	One or more calculation periods for which performance data will be returned. Contains <CalculationTypeId> element that represents a static performance calculation supported by Lipper. For full listing of available calculation typeIDs, see section Calculation TypeId Enumeration in the Lipper Data Enumerations chapter. Note: The GetTopPerformersByClassificationScheme_1 operation works as desired only if a single <CalculationTypeId> is specified though declared as multiple in the schema.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

The response returns performance data for the given classification scheme and time period:

XML Sample Response - Getting Top Performers By Classification Scheme

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetTopPerformersByClassificationScheme_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetTopPerformersByClassificationScheme_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
```



<pre> <TopPerformersByClassificationSchemeResult> <ClassificationSchemeCode>ABILIFE2008</ClassificationSchemeCode> <ClassificationSchemeName>ABI Life Scheme</ClassificationSchemeName> <Language>English</Language> <CalculationList> <PerformanceCalculation> <Language>English</Language> <CalculationPeriodName>1 Month Performance to Last Month End</CalculationPeriodName> <CalculationAcronym>1mPerf:</CalculationAcronym> <AsOfDate>2009-03-31T00:00:00</AsOfDate> <PerformerList> <PerformerCalculationItem> <IndexIdentity> <LipperId>19074032</LipperId> <Language>English</Language> <Name>ABI UK - Commodity/Energy-Life</Name> </IndexIdentity> <ClassId>28992</ClassId> <Language>English</Language> <Value>11.796210</Value> </PerformerCalculationItem> <PerformerCalculationItem> <IndexIdentity> <LipperId>19074016</LipperId> <Language>English</Language> <Name>ABI UK - Global Emerging Markets Eq-Life</Name> </IndexIdentity> <ClassId>28976</ClassId> <Language>English</Language> <Value>11.103360</Value> </PerformerCalculationItem> ... <PerformerCalculationItem> <IndexIdentity> <LipperId>19074010</LipperId> <Language>English</Language> <Name>ABI UK - Europe inc UK Equities-Life</Name> </IndexIdentity> <ClassId>28970</ClassId> <Language>English</Language> <Value>3.289920</Value> </PerformerCalculationItem> </PerformerList> </PerformanceCalculation> </CalculationList> </TopPerformersByClassificationSchemeResult> </GetTopPerformersByClassificationScheme_Response_1> </Body> </Envelope> </pre>	

Element	Description
ClassificationScheme Code	The classification type's ID.
ClassificationScheme Name	The name of the classification scheme.
Language	The display language for the asset identity information.
CalculationList	The performance calculation data. Contains the following elements: • Language - the display language for the asset identity information. • CalculationPeriodName - the name of the performance calculation period. • CalculationAcronym - the calculation acronym. • AsOfDate - the date for which the retrieved data is valid. • PerformerList - the performer value. A list of <PerformerCalculationItem> elements. Contains the following elements: • IndexIdentity- the asset identity (LipperId, Language and Name). • ClassId - the class ID. • Language - the display language for the performance calculation data. • Value - the value of the performance calculation.



24.4.52 Get Top Performers By LG Classification Schema (GetTopPerformersByLGClassificationSchema_1)

You can use the GetTopPerformersByLGClassificationSchema_1 method to retrieve the top or best-performing funds (based on year-to-date performance) for one or more Lipper Global Classification Schemas.

Lipper Fund Classifications

Lipper fund classifications provide the ability to make meaningful 'like for like' comparisons across funds with similar investment mandates. Choose from style based holdings classifications; proprietary fund association local market schemes; or take a much broader approach by using the Lipper Global Classification which encompasses all funds tracked by Lipper.

The example below retrieves 10 best funds for the 'LipperGlobal' classification schema expressed in US dollars and displayed in English language:

XML Sample Request - Getting Top Performers By LG Classification Schema

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetTopPerformersByLGClassificationSchema_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetTopPerformersByLGClassificationSchema_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <IGClassificationSchemaName>
        <LGClassificationSchema>LipperGlobal</LGClassificationSchema>
      </IGClassificationSchemaName>
      <currencyCode>USD</currencyCode>
      <language>English</language>
      <numberOfAssets>10</numberOfAssets>
    </GetTopPerformersByLGClassificationSchema_Request_1>
  </Body>
</Envelope>
```

Parameter	Description
IGClassificationSchemaName	The Lipper Global Classification schema for which top-performing funds should be returned. Available Lipper Global Classification schemes are listed in the LG Classification Scheme Enumeration section in the Lipper Data Enumerations chapter.
currencyCode	The display currency for the returned data. For full listing of available currency codes, see section Currency Code Enumeration in the Lipper Data Enumerations chapter.
language	The display language for the returned data.
numberOfAssets	The number of top-performing assets to be returned.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

The response returns the best-performing funds for the given Lipper Classification Schema:

XML Sample Response - Getting Top Performers By LG Classification Schema

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetTopPerformersByLGClassificationSchema_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
    </CacheResponse>
  </s:Header>
  <s:Body>
    <GetTopPerformersByLGClassificationSchema_1_Reply>
      <IGClassificationSchemaName>
        <LGClassificationSchema>LipperGlobal</LGClassificationSchema>
      </IGClassificationSchemaName>
      <currencyCode>USD</currencyCode>
      <language>English</language>
      <numberOfAssets>10</numberOfAssets>
    </GetTopPerformersByLGClassificationSchema_1_Reply>
  </s:Body>
</s:Envelope>
```



```

    <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetTopPerformersByLGClassificationSchema_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <TopPerformersByLGClassificationSchemaResult>
        <LGPerformerType>
          <LGClassificationSchemeName>LipperGlobal</LGClassificationSchemeName>
          <LGPerformerList>
            <LGPerformerItem>
              <LipperId>65011402</LipperId>
              <Language>English</Language>
              <FundShortName>Nordea Saasto 25 Tuotto</FundShortName>
              <PerfYTD>268.1287</PerfYTD>
            </LGPerformerItem>
            <LGPerformerItem>
              <LipperId>63500563</LipperId>
              <Language>English</Language>
              <FundShortName>Invesco Greatwall Dom Demd Gth</FundShortName>
              <PerfYTD>191.7876</PerfYTD>
            </LGPerformerItem>
            ...
            <LGPerformerItem>
              <LipperId>63500860</LipperId>
              <Language>English</Language>
              <FundShortName>Industrial Trend Investment Hy</FundShortName>
              <PerfYTD>169.0458</PerfYTD>
            </LGPerformerItem>
          </LGPerformerList>
        </LGPerformerType>
      </TopPerformersByLGClassificationSchemaResult>
    </GetTopPerformersByLGClassificationSchema_Response_1>
  </s:Body>
</Envelope>

```

Element	Description
LGClassificationSchemeName	The Lipper Global Classification Scheme name.
LGPerformerList	The list of funds. Contains the following elements: • LipperId - the asset's Lipper ID. • Language - the display language for the data. • FundShortName - the short name of the asset. • PerfYTD - the fund's year-to-date performance.

24.4.53 Get Total Net Asset By Period Advanced (GetTotalNetAssetByPeriodAdvanced_1)

You can use the GetTotalNetAssetByPeriodAdvanced_1 method to retrieve a detailed list of the Total Net Asset (TNA) values for the specified period for the given asset(s).

TNA stands for Total Net Asset or the total funds under management, expressed in millions in currency of the fund.

Note: The GetTotalNetAssetByPeriodAdvanced_1 method provides 2 years of monthly Total Net Assets while GetTotalNetAssetByPeriodBasic_1 - only the latest TNAs.

The example below gets detailed list of all available TNA values expressed in US dollars for the specified period for the assets with '60003333' and '60003331' LipperIDs:

XML Sample Request - Getting Total Net Asset By Period Advanced

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>

```



```

<MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
<Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/
LipperFundamentals_1/GetTotalNetAssetByPeriodAdvanced_1</Action>
<Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
  <ApplicationID>[AppID]</ApplicationID>
  <Token>[service token]</Token>
</Authorization>
</Header>
<Body>
  <GetTotalNetAssetByPeriodAdvanced_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/
LipperFundamentals_1">
    <lipperIDs>
      <int>60003333</int>
      <int>60003331</int>
    </lipperIDs>
    <currencyCode>USD</currencyCode>
    <beginDate>2009-01-01</beginDate>
    <endDate>2009-03-03</endDate>
    <latestOnly>false</latestOnly>
  </GetTotalNetAssetByPeriodAdvanced_Request_1>
</Body>
</Envelope>

```

Parameter	Description
lipperID	A unique eight- or nine-digit number that identifies an asset.
currencyCode	The display currency for returned TNA values. For full listing of available currency codes, see section Currency Code Enumeration in the Lipper Data Enumerations chapter.
beginDate	The begin date of the specified period.
endDate	The end date of the specified period.
latestOnly	If set to true then only data for the most recently available date will be returned. If false then all available TNA data will be returned.

The response returns a detailed list of all available TNA values for the specified period for the specified assets:

XML Sample Response - Getting Total Net Asset By Period Advanced

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/
GetTotalNetAssetByPeriodAdvanced_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
    </DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetTotalNetAssetByPeriodAdvanced_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/
LipperFundamentals_1">
      <TotalNetAssetByPeriodResult>
        <TotalNetAssetType>
          <LipperId>60003333</LipperId>
          <TotalNetAssetList>
            <TotalNetAssetItem>
              <DataDate>2009-01-30</DataDate>
              <CurrencyCode>USD</CurrencyCode>
              <TotalNetAssets>25997631.23237</TotalNetAssets>
              <TotalNetAssetsInMillions>25.9976312</TotalNetAssetsInMillions>
            </TotalNetAssetItem>
            <TotalNetAssetItem>
              <DataDate>2009-02-27</DataDate>
              <CurrencyCode>USD</CurrencyCode>
              <TotalNetAssets>22260226.19184</TotalNetAssets>
              <TotalNetAssetsInMillions>22.2602262</TotalNetAssetsInMillions>
            </TotalNetAssetItem>
          </TotalNetAssetList>
        </TotalNetAssetType>
      </TotalNetAssetByPeriodResult>
    </GetTotalNetAssetByPeriodAdvanced_Response_1>
  </s:Body>
</s:Envelope>

```



<pre> <TotalNetAssetType> <LipperId>60003331</LipperId> <TotalNetAssetList> <TotalNetAssetItem> <DataDate>2009-01-30</DataDate> <CurrencyCode>USD</CurrencyCode> <TotalNetAssets>7339300</TotalNetAssets> <TotalNetAssetsInMillions>7.3393</TotalNetAssetsInMillions> </TotalNetAssetItem> <TotalNetAssetItem> <DataDate>2009-02-27</DataDate> <CurrencyCode>USD</CurrencyCode> <TotalNetAssets>7536600</TotalNetAssets> <TotalNetAssetsInMillions>7.5366</TotalNetAssetsInMillions> </TotalNetAssetItem> </TotalNetAssetList> </TotalNetAssetType> </TotalNetAssetByPeriodResult> </GetTotalNetAssetByPeriodAdvanced_Response_1> </Body> </Envelope> </pre>

Element	Description
LipperId	The asset's Lipper ID.
TotalnetAssetList	The list of TNA values for the specified asset. Contains the following elements: • DataDate - the date for which the TNA value is valid. • CurrencyCode - the currency code that represents the currency for the TNA value. • TotalNetAssets - the TNA value for the stated data date. • TotalNetAssetsInMillions - the TNA value in millions for the stated data date.

24.4.54 Get Total Net Asset By Period Basic (GetTotalNetAssetByPeriodBasic_1)

You can use the GetTotalNetAssetByPeriodBasic_1 method to retrieve a basic list of the Total Net Asset (TNA) values for the specified period for the given asset(s).

Note: The GetTotalNetAssetByPeriodBasic_1 method provides only the latest Total Net Assets while GetTotalNetAssetByPeriodAdvanced_1 - two years of monthly TNAs.

The example below gets list of TNA values expressed in US dollars for the specified period for the assets with '60003333' and '60003331' LipperIDs:

XML Sample Request - Getting Total Net Asset By Period Basic
<pre> <Envelope xmlns="http://www.w3.org/2003/05/soap-envelope"> <Header> <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To> <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID> <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetTotalNetAssetByPeriodBasic_1</Action> <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1"> <ApplicationID>[AppID]</ApplicationID> <Token>[service token]</Token> </Authorization> </Header> <Body> <GetTotalNetAssetByPeriodBasic_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1"> <lipperIDs> <int>60003333</int> <int>60003331</int> </lipperIDs> <currencyCode>USD</currencyCode> <beginDate>2009-01-01</beginDate> <endDate>2009-03-03</endDate> </GetTotalNetAssetByPeriodBasic_Request_1> </Body> </Envelope> </pre>



Parameter	Description
lipperID	A unique eight- or nine-digit number that identifies an asset.
currencyCode	The display currency for returned TNA values. For full listing of available currency codes, see section Currency Code Enumeration in the Lipper Data Enumerations chapter.
beginDate	The begin date of the specified period.
endDate	The end date of the specified period.

The response returns a list of basic TNA values for the specified period for the specified assets:

XML Sample Response - Getting Total Net Asset By Period Basic

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/
    GetTotalNetAssetByPeriodBasic_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetTotalNetAssetByPeriodBasic_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <TotalNetAssetByPeriodResult>
        <TotalNetAssetType>
          <LipperId>60003331</LipperId>
          <TotalNetAssetList>
            <TotalNetAssetItem>
              <DataDate>2009-02-27</DataDate>
              <CurrencyCode>USD</CurrencyCode>
              <TotalNetAssets>7536600</TotalNetAssets>
              <TotalNetAssetsInMillions>7.5366</TotalNetAssetsInMillions>
            </TotalNetAssetItem>
          </TotalNetAssetList>
        </TotalNetAssetType>
        <TotalNetAssetType>
          <LipperId>60003333</LipperId>
          <TotalNetAssetList>
            <TotalNetAssetItem>
              <DataDate>2009-02-27</DataDate>
              <CurrencyCode>USD</CurrencyCode>
              <TotalNetAssets>22260226.19184</TotalNetAssets>
              <TotalNetAssetsInMillions>22.2602262</TotalNetAssetsInMillions>
            </TotalNetAssetItem>
          </TotalNetAssetList>
        </TotalNetAssetType>
      </TotalNetAssetByPeriodResult>
    </GetTotalNetAssetByPeriodBasic_Response_1>
  </s:Body>
</Envelope>
```

Element	Description
LipperId	The asset's Lipper ID.
TotalnetAssetList	The list of TNA values for the specified asset. Contains the following elements: • DataDate - the date for which the TNA value is valid. • CurrencyCode - the currency code that represents the currency for the TNA value. • TotalNetAssets - the TNA value for the stated data date. • TotalNetAssetsInMillions - the TNA value in millions for the stated data date.



24.5 Lipper Data Enumerations

This chapter provides reference information on Lipper data that can be requested/retrieved by making requests using Lipper services.

24.5.1 Allocation Enumeration

The table below lists available allocations and their descriptions:

Allocation	Description
Asset	Asset allocation shows the percentage of the portfolio's assets invested in Cash, Common Stock, Preferred Stock, Convertible, Bonds, Other, and Fund (if a fund of a fund).
Exchange	
Currency	Currency allocation shows the percentage of the portfolio's assets invested in each currency.
DebtorQuality	Quality allocation displays the percentage of the portfolio's assets invested in the quality ratings (e.g., Gov't/AAA, AA, A, BBB, NR, etc).
EquityQuality	Equity Quality.
EquityCountry	Equity Country.
EquityRegion	Equity Region.
FixedIncomeCountry	Fixed Income Country.
FixedIncomeRegion	Fixed Income Region.
ICB	Industry Classification Benchmark.
Region	Region.
FTSEIndustrySector	FTSE Industry Sector Allocation shows the percentage of the portfolio's assets invested in each sector.
Capitalisation	Capitalisation allocation shows the portfolio's current price multiplied by the number of outstanding shares. Shows the corporate size of a stock.
Country	Country allocation shows the percentage of the portfolio's assets invested in each country, based on company domicile.
Maturity	Maturity allocation shows the percentage of the portfolio's assets invested in a specified maturity range (e.g., < 1 year, 1-3 years, 3-5 years, 5-10 years, 10-20 years, 20-30 years, > 30 years, equity/other).
Top10Holdings	The Top 10 Holdings allocation shows the portfolio's top ten holdings with the greatest asset weighting (by %TNA).
DebtorDomicile	Debtor Domicile allocation shows the percentage of the portfolio's fixed-income assets allocated to each country of debtor domicile.
AssetAllocationElectronic	Asset Allocation Electronic.
All	All shows all types of allocation for the portfolio.

24.5.2 Countries Enumeration

The table below lists available country codes and their descriptions:

Country	Description



Code	
None	None
AND	Andorra
AUS	Australia
AUT	Austria
ARG	Argentina
ANT	Netherlands Antilles
ARE	United Arab Emirates
BEL	Belgium
BHS	Bahamas
BHR	Bahrain
BMU	Bermuda
BRB	Barbados
BGR	Bulgaria
BRA	Brazil
CAN	Canada
CHE	Switzerland
CHL	Chile
CHN	China
COK	Cook Islands
CYM	Cayman Islands
CYP	Cyprus
CZE	Czech Republic
DEU	Germany
DNK	Denmark
DUB	Dublin
ESP	Spain
EST	Estonia
EXTAIWAN	Taiwan De-Authorised
FIN	Finland
FRA	France
GBR	United Kingdom
GIB	Gibraltar
GRC	Greece
GGY	Guernsey
HKG	Hong Kong
HUN	Hungary
HFF	Hedge Fund
IDN	Indonesia
IND	India
IMN	Isle of Man
IRL	Ireland
ISL	Iceland
ITA	Italy
ISR	Israel
INTL	International
JPN	Japan
JEY	Jersey
KWT	Kuwait
KOR	Korea, Republic Of



LAT	Latvia
LBN	Lebanon
LIE	Liechtenstein
LTU	Lithuania
LIT	Lithuania
LVA	Latvia
LUX	Luxembourg
MAC	Macau
MCO	Monaco
MLT	Malta
MUS	Mauritius
MYS	Malaysia
MEX	Mexico
NLD	Netherlands
NZL	New Zealand
NOR	Norway
OMN	Oman
OFFSHORE	Offshore Fund
PAN	Panama
PER	Peru
PHL	Philippines
POL	Poland
PRI	Puerto Rico
PRT	Portugal
QAT	Qatar
SAU	Saudi Arabia
SGP	Singapore
SVK	Slovakia (Slovak Republic)
SVN	Slovenia
ZAF	ZAF (South Africa)
SWE	Sweden
THA	Thailand
TTO	Trinidad and Tobago
TUR	Turkey
TWN	Taiwan
USA	United States
USAFI	USA Fixed Income
VUT	Vanuatu
VGB	The British Virgin Islands
AUR	Aurum Mining Funds
NZD	New Zealand Dollars
CAD	Canadian Dollars
JOR	Jordan
MAR	Morocco
PAK	Pakistan
TUN	Tunisia
VNM	Vietnam
EGY	Egypt
USAEQ	USA Equity
BWA	Botswana



PRK	North Korea
RUS	Russian Federation
SWZ	Swaziland

24.5.3 Currency Code Enumeration

The table below lists available currency codes and their descriptions:

Currency Code	Description
GBX	British Penny Sterling
GBP	British Pound
USD	United States Dollar
AUD	Australian Dollar
BEF	Belgian Franc
CAD	Canadian Dollar
NLG	Dutch Guilder
FRF	French Franc
HKD	Hong Kong Dollars
DKK	Danish Krone
ITL	Italian Lira
DEM	German Mark
NZD	New Zealand Dollar
CHF	Swiss Franc
JPY	Japanese Yen
IEP	Irish Pound
PTE	Portuguese Escudo
ESP	Spanish Peseta
NOK	Norwegian Kroner
SEK	Swedish Krona
ATS	Austrian Schilling
SGD	Singapore Dollar
XEU	European Currency Unit
IRUP	IRUP (Indian Rupee)
ZAR	South African Rand
MYR	Malaysian Ringgit
THB	Thai Baht
MXN	Mexican Peso
LC	Local Currency
FIM	Finnish Markka
ARS	Argentine Peso
BRL	Brazilian Real
GRD	Greek Drachma
IDR	Indonesian Rupiah
IRR	Iranian Rial
KWD	Kuwaiti Dinar
LUF	Luxembourg Franc
PHP	Philippine Peso
SAR	Saudi Riyal
KRW	Korean Won



TWD	Taiwan Dollar
AED	United Arab Emirates Dirham
ILS	Israeli New Shekel
TRY	Turkish Lira
AFA	Afghanistan Afghani
ALL	Albanian Lek
DZD	Algerian Dinar
ESPA	Spanish Espana
AOA	Angolan Kwanza
AMD	Armenia Dram
AWG	Aruban Florin
AZN	Azerbaijani Manat
BSD	Bahamian Dollar
BHD	Bahraini Dinar
BDT	Bangladeshi Taka
BBD	Barbadian Dollar
BYR	Belarusian Ruble
BZD	Belize Dollar
XOF	CFA Franc BCEAO (West African CFA Franc)
BMD	Bermudian Dollar
BTN	Bhutan Ngultrum
BOB	Bolivian Boliviano
BWP	Botswana Pula
BND	Brunei Dollar
BUK	Burmese Kyat
BIF	Burundi Franc
KHR	Kampuchean (Cambodian) Riel
XAF	CFA Franc BEAC (Central African CFA Franc)
CISP	CISP
CVE	Cape Verde Escudo
KYD	Cayman Islands Dollar
CLP	Chilean Peso
CNY	Chinese Yuan Renminbi
COP	Colombian Peso
KMF	Comoros Franc
CRC	Costa Rican Colon
HRK	Croatian Kuna
CUP	Cuban Peso
CYP	Cyprus Pound
CZK	Czech Koruan
DJF	Djibouti Franc
XCD	East Caribbean Dollar
DOP	Dominican Peso
ECS	Ecuador Sucre
EGP	Egyptian Pound
SVC	El Savador Colon
MTL	Maltese Lira
EEK	Estonian Kroon
ETB	Ethiopian Birr
FKP	Falkland Islands Pound



FJD	Fiji Dollar
IQD	Iraqi Dinar
GMD	Gambian Dalasi
GHC	Ghanaian Cedi
GIP	Gibraltar Pound
GTQ	Guatemalan Quetzal
MRO	Mauritanian Ouguiya
MUR	Mauritius Rupee
MDL	Moldavan Leu
FRF	French Franc
MNT	Mongolian Tugrik
MAD	Moroccan Dirham
MZN	Mozambique Meticals
NPR	Nepalese Rupee
XDR	International Monetary Fund Special Drawing Rights
ANG	Netherlands Antillian Guilder
UAH	Ukraine Hryvnia
NIC	Nicaraguan Córdoba
NGN	Nigerian Naira
OMR	Oman Rial
PKR	Pakistan Rupee
PAB	Panamanian Balboa
PGK	Papua New Guinea Kina
PYG	Paraguay Gurani
PEN	Peruvian Nuevo Sol
PLN	Polish Zloty
USDP	USDP
QAR	Qatari Rial
RON	Romanian Leu
RWF	Rwandan Franc
SHP	St. Helena Pound
STD	Sao Tome and Principe Dobra
SCR	Seychelles Rupee
SLL	Sierra Leone Leone
SKK	Slovak Koruna
SIT	Slovenian Tolar
SBD	Solomon Islands Dollar
SOS	Somali Schilling
LKR	Sri Lanka Rupee
SDD	Sudanese Dinar
SRD	Suriname Dollar
SZL	Swaziland Lilangeni
SYP	Syrian Pound
BGN	Bulgarian Lev
TZS	Tanzanian Schilling
EUR	European Union Euro
TOP	Tongan Pa'anga
TTD	Trinidad and Tobago Dollar
TND	Tunisian Dinar
UGX	Uganda Shilling



RUB	Russian Rouble
INR	Indian Rupee
RUR	Russian Ruble (pre-1997)
UYU	Uruguayan Peso
VUV	Vanuatu Vatu
VEB	Venezuelan Bolivar
VND	Vietnamese Dong
USDB	USDB
WST	Samoan Tala
YER	Yemen Rials
YUD	New Yugoslavian Dinar
ZRZ	Zaureab Zaire
ZMK	Zambian Kwacha
ZWD	Zimbabwe Dollar
GNF	Guinea Franc
GWP	Guinea-Bissau Peso
GYD	Guyan Dollar
HTG	Haitian Gourde
HNL	Honduran Lempira
HUF	Hungarian Forint
ISK	Iceland Krona
JMD	Jamaican Dollar
JOD	Jordanian Dinar
KZT	Kazakhstan Tenge
KES	Kenyan Shilling
KPW	North Korean Won
LAK	Lao Kip
LVL	Latvian Lats
LBP	Lebanese Pound
LSM	Lesotho Maloti
LRD	Liberian Dollar
LYD	Libyan Dinar
CHFL	CHFL
LTL	Lithuanian Litas
MOP	Macau Pataca
MKD	Macedonian Denar
MGA	Malagasy Ariary
MWK	Malawi Kwacha
MVR	Maldivian Rufiyaa
MLF	Mali Franc
BAM	Bosnia and Herzegovina Convertible Mark
CDF	Congolese Franc
GEL	Georgian Lari
KGS	Kyrgyzstanian Som
LSL	Lesotho Loti
NAD	Namibian Dollar
NIO	Nicaraguan Cordoba Oro
RSD	Serbian Dinar
SRG	Suriname Guilder
UZS	Uzbekistani Sum



XPF	Comptoirs Français du Pacifique Francs
TRL	Turkish Lira
GHC	Ghana Cedi
SDG	Sudanese Pound
VEF	Venezuelan Bolivar Fuerte
None	None

24.5.4 Universe Enumeration

The table below lists available universe codes and their descriptions:

Code	Description
INTL	International Offshore
GBR	United Kingdom
CHE	Switzerland
DEU	Germany
FRA	France
ITA	Italy
HKG	Hong Kong
SGP	Singapore
MYS	Malaysia
TWN	Taiwan
THA	Thailand
JPN	Japan
ESP	Spain
AUT	Austria
IND	India
CHN	China
GBRLF	UK Life Assets
GBRPF	UK Pension Assets
USA	United States
KOR	Korea
BEL	Belgium
HKPF	Hong Kong Pension Funds
NLD	Netherlands
AUS	Australia
FIN	Finland
NOR	Norway
SWE	Sweden
DNK	Denmark
CAN	Canada
LUX	Luxembourg
ESPPF	Spain Pension Funds
ITAPF	Italy Pension Funds
CZE	Czech Republic
POL	Poland
SVK	Slovakia



24.5.5 Calculation TypeID Enumeration

The table below lists available calculation type IDs and their descriptions:

Calculation TypeID	Description
OneMonthPerformancetoLastMonthEnd	One Month Performance to Last Month End
ThreeMonthPerformancetoLastMonthEnd	Three Month Performance to Last Month End
SixMonthPerformancetoLastMonthEnd	Six Month Performance to Last Month End
OneYearPerformancetoLastMonthEnd	One Year Performance to Last Month End (the performance is calculated backward from last month for 1 year)
ThreeYearPerformancetoLastMonthEnd	Three Year Performance to Last Month End
FiveYearPerformancetoLastMonthEnd	Five Year Performance to Last Month End
TenYearPerformancetoLastMonthEnd	Ten Year Performance to Last Month End
YeartoMonthEndPerformance	Year to Month End Performance (the performance is calculated from Jan 1st to last month)
Best3MonthswithintheLast3YearstoLastMonthEnd	Best 3 Months within the Last 3 Years to Last Month End
Worst3MonthswithintheLast3YearstoLastMonthEnd	Worst 3 Months within the Last 3 Years to Last Month End
Alphafor1YeartoLastMonthEnd	Alpha for 1 Year to Last Month End
Alphafor3YearstoLastMonthEnd	Alpha for 3 Years to Last Month End
Alphafor5YearstoLastMonthEnd	Alpha for 5 Years to Last Month End
Alphafor10YearstoLastMonthEnd	Alpha for 10 Years to Last Month End
Betafor1YeartoLastMonthEnd	Beta for 1 Year to Last Month End
Betafor3YearstoLastMonthEnd	Beta for 3 Years to Last Month End
Betafor5YearstoLastMonthEnd	Beta for 5 Years to Last Month End
Betafor10YearstoLastMonthEnd	Beta for 10 Years to Last Month End
RSquaredfor1YeartoLastMonthEnd	R Squared for 1 Year to Last Month End
RSquaredfor3YearstoLastMonthEnd	R Squared for 3 Years to Last Month End
RSquaredfor5YearstoLastMonthEnd	R Squared for 5 Years to Last Month End
RSquaredfor10YearstoLastMonthEnd	R Squared for 10 Years to Last Month End
RelativePerformancefor6MonthstoLastMonthEnd	Relative Performance for 6 Months to Last Month End
RelativePerformancefor1YeartoLastMonthEnd	Relative Performance for 1 Year to Last Month End
RelativePerformancefor3YearstoLastMonthEnd	Relative Performance for 3 Years to Last Month End
RelativePerformancefor5YearstoLastMonthEnd	Relative Performance for 5 Years to Last Month End
RelativePerformancefor10YearstoLastMonthEnd	Relative Performance for 10 Years to Last Month End
StandardDeviationfor1YeartoLastMonthEnd	Standard Deviation for 1 Year to Last Month End
StandardDeviationfor3YearstoLastMonthEnd	Standard Deviation for 3 Years to Last Month End
StandardDeviationfor5YearstoLastMonthEnd	Standard Deviation for 5 Years to Last Month End



stMonthEnd	
StandardDeviationfor10YearstoLastMonthEnd	Standard Deviation for 10 Years to Last Month End
SharpeRatiofor1YearstoLastMonthEnd	Sharpe Ratio for 1 Year to Last Month End
SharpeRatiofor3YearstoLastMonthEnd	Sharpe Ratio for 3 Years to Last Month End
SharpeRatiofor5YearstoLastMonthEnd	Sharpe Ratio for 5 Years to Last Month End
SharpeRatiofor10YearstoLastMonthEnd	Sharpe Ratio for 10 Years to Last Month End
InformationRatiofor1YearstoLastMonthEnd	Information Ratio for 1 Year to Last Month End
InformationRatiofor3YearstoLastMonthEnd	Information Ratio for 3 Years to Last Month End
InformationRatiofor5YearstoLastMonthEnd	Information Ratio for 5 Years to Last Month End
InformationRatiofor10YearstoLastMonthEnd	Information Ratio for 10 Years to Last Month End
ReturnRiskRatiofor1YearstoLastMonthEnd	Return Risk Ratio for 1 Year to Last Month End
ReturnRiskRatiofor3YearstoLastMonthEnd	Return Risk Ratio for 3 Years to Last Month End
ReturnRiskRatiofor5YearstoLastMonthEnd	Return Risk Ratio for 5 Years to Last Month End
ReturnRiskRatiofor10YearstoLastMonthEnd	Return Risk Ratio for 10 Years to Last Month End
MaxDrawdownfor1YearstoLastMonthEnd	Max Drawdown for 1 Year to Last Month End
MaxDrawdownfor3YearstoLastMonthEnd	Max Drawdown for 3 Years to Last Month End
MaxDrawdownfor5YearstoLastMonthEnd	Max Drawdown for 5 Years to Last Month End
MaxDrawdownfor10YearstoLastMonthEnd	Max Drawdown for 10 Years to Last Month End
TreynorRatiofor1YearstoLastMonthEnd	Treynor Ratio for 1 Year to Last Month End
TreynorRatiofor3YearstoLastMonthEnd	Treynor Ratio for 3 Years to Last Month End
TreynorRatiofor5YearstoLastMonthEnd	Treynor Ratio for 5 Years to Last Month End
TreynorRatiofor10YearstoLastMonthEnd	Treynor Ratio for 10 Years to Last Month End
Correlationfor1YearstoLastMonthEnd	Correlation for 1 Year to Last Month End
Correlationfor3YearstoLastMonthEnd	Correlation for 3 Years to Last Month End
Correlationfor5YearstoLastMonthEnd	Correlation for 5 Years to Last Month End
Correlationfor10YearstoLastMonthEnd	Correlation for 10 Years to Last Month End
TrackingErrorfor1YearstoLastMonthEnd	Tracking Error for 1 Year to Last Month End
TrackingErrorfor3YearstoLastMonthEnd	Tracking Error for 3 Years to Last Month End
TrackingErrorfor5YearstoLastMonthEnd	Tracking Error for 5 Years to Last Month End



nthEnd	
TrackingErrorfor10YearstoLastMonthEnd	Tracking Error for 10 Years to Last Month End
RelativePerformancefor3MonthstoLastMonthEnd	Relative Performance for 3 Months to Last Month End
RelativePerformancefor1MonthtoLastMonthEnd	Relative Performance for 1 Month to Last Month End
PerformanceFromInceptiontoLastMonthEnd	Performance From Inception to Last Month End
RelativePerformanceYeartoMonthEnd	Relative Performance Year to Month End
OneMonthIndexedPerformancetoLastMonthEnd	OneMonthPerformancetoLastMonthEnd * 100
ThreeMonthIndexedPerformancetoLastMonthEnd	ThreeMonthPerformancetoLastMonthEnd * 100
SixMonthIndexedPerformancetoLastMonthEnd	SixMonthPerformancetoLastMonthEnd * 100
OneYearIndexedPerformancetoLastMonthEnd	OneYearPerformancetoLastMonthEnd * 100
ThreeYearIndexedPerformancetoLastMonthEnd	ThreeYearPerformancetoLastMonthEnd * 100
FiveYearIndexedPerformancetoLastMonthEnd	FiveYearPerformancetoLastMonthEnd * 100
TenYearIndexedPerformancetoLastMonthEnd	TenYearPerformancetoLastMonthEnd * 100
OneMonth10KReinvestPerformancetoLastMonthEnd	OneMonthPerformancetoLastMonthEnd * 10000
ThreeMonth10KReinvestPerformancetoLastMonthEnd	ThreeMonthPerformancetoLastMonthEnd * 10000
SixMonth10KReinvestPerformancetoLastMonthEnd	SixMonthPerformancetoLastMonthEnd * 10000
OneYear10KReinvestPerformancetoLastMonthEnd	OneYearPerformancetoLastMonthEnd * 10000
ThreeYear10KReinvestPerformancetoLastMonthEnd	ThreeYearPerformancetoLastMonthEnd * 10000
FiveYear10KReinvestPerformancetoLastMonthEnd	FiveYearPerformancetoLastMonthEnd * 10000
TenYear10KReinvestPerformancetoLastMonthEnd	TenYearPerformancetoLastMonthEnd * 10000
None	None

24.5.6 Classification Scheme Enumeration

The table below lists available classification schemes and their descriptions:

Classification Scheme	Description
ABILIFE2008	ABI Life Scheme
ABIPEN2008	ABI Pension Scheme
ABIUKLIFE	ABI UK Old Life Fund
ABIUKPENSION	ABI UK Old Pension Fund
AITCINVTRUST	AIC Investment Trust
FRANCE	AMF
ARGCAM	Argentina Camara
ASSOGESTIONI	Assogestioni



ASSOGPF	Assogestioni Fondi Pensione
ASSOGEST2003	Assogestioni 2003
BRAZANBID	Brazil Anbid
CIFSC2	CIFSC
CIFSCDONOTUSE	CIFSC DO NOT USE
CHILESVS	Chile SVS
CzechRepublicAFAM	Czech Republic AFAM
BVI2006	German BVI
HEXCLASS	HEX Classification
HBC	Holdings Based Classification
HKPC	Hong Kong Pension Funds
AUTIFUNITTR	IMA
JAPANITA	Japanese ITA
JPNITABROAD	Japanese ITA Broad
JPNITAFINE	Japanese ITA Fine
JPNITAMED	Japanese ITA Intermediary
KOREAAMAK	Korea AMAK
AMAKDETAIL	Korea AMAK Detail
AMAKEQRATIO	Korea AMAK Equity Ratio
AMAKINV	Korea AMAK Investment
AMAKRANK	Korea AMAK Rank
LGC2005	Lipper Global
LIPPERITG	Lipper Italian General
LipperKoreaZeroIn	Lipper Korea ZeroIn
LIPPERMALAY	Lipper Malaysia
LIPPERCH	Lipper Schweiz
LIPPERCHP	Lipper Swiss Pension
LIPPERTW2	Lipper Taiwan
UKOFFSHORE	Lipper UK Offshore Fund
MEXCNBV	Mexican CNBV
MONEYFACTSSA	Money Facts Savings Account
NMFA	Norwegian Mutual Fund Assoc
PERUONCLA	Peru CONASEV
PHTOAP	Phillipines TOAP
APFIPP	Portugese APIFIPCMVM
TAIWAN	SITCA Domestic
SAUIPC	Saudi Arabia IPC
SASS	Slovakia SASS
SPAIN	Spanish Inverco CNMV
SPINV	Spanish Pension Inverco
TAIMCB	Thailand AIMC Broad
TAIMCD	Thailand AIMC Detailed
THAISEC	Thailand SEC
ABIUKBROKER	UK Broker Fund
UKFTSESE	UKFTSE Stock Exchange
US_FUND_OBJ	US Mutual Fund Objective
USMSECTOR	US Mutual Fund Sector



24.5.7 LG Classification Scheme Enumeration

The table below lists available Lipper Global classification schemes and their descriptions:

Classification Scheme	Description
LipperGlobal	Lipper Global
LipperGlobalBonds	Lipper Global Bonds
LipperGlobalEquities	Lipper Global Equities
LipperGlobalHedge	Lipper Global Hedge
LipperGlobalMixedAssets	Lipper Global Mixed Assets
LipperGlobalMoneyMarket	Lipper Global Money Market
LipperGlobalRealEstate	Lipper Global Real Estate
LipperGlobalOther	Lipper Global Other
None	No Schema (Default)



chapter 25 Lipper Overview

The Lipper Overview service provides methods that allow the user to retrieve a wide range of basic Lipper fund data.

The following methods are available through Lipper Overview:

- **Get Asset Details Analysis SP (GetAssetDetailsAnalysisSP_1)** - returns asset analysis details (performance calculations) for the given asset(s).
- **Get Asset Details Attributes (GetAssetDetailsAttributes_1)** - returns a detailed list of attributes for the given asset(s).
- **Get Asset Details Financial Advanced (GetAssetDetailsFinancialAdvanced_1)** - returns financial details for the given asset(s).
- **Get Asset Details Financial Basic (GetAssetDetailsFinancialBasic_1)** - returns basic financial information for the given asset(s).
- **Get Asset Details Overview Basic (GetAssetDetailsOverviewBasic_1)** - returns asset details for the given asset(s).
- **Get Asset Details Prices Basic (GetAssetDetailsPricesBasic_1)** - returns listed prices for the given asset(s).
- **Get Asset Details Ratings (GetAssetDetailsRatings_1)** - returns all of the Lipper Leader scores for the given asset(s).

25.1 Authentication/Authorization, Service Endpoint, and Required Headers

Authorization

All requests to the Lipper Overview service require an authorization token. For details, see section Understanding Authentication Tokens.

Authentication

Lipper Overview uses Reuters impersonation tokens for each effective user. In this case, Thomson Reuters must create each user before your application authenticates them. Unmanaged effective users are not supported in Lipper Overview.

For additional information on creating a Service Token, see section Creating a Token.

Service Endpoint

Lipper Overview Endpoint

<http://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc>

Required Header

Required HTTP Headers

POST /api/LipperFundamentals/LipperFundamentals.svc HTTP/1.1
 Content-Type: application/soap+xml
 Host: api.rkd.reuters.com
 Content-Length: [length]

25.2 WSDL

WSDL:

http://api.rkd.reuters.com/schemas/LipperFundamentals/wsdll/LipperFundamentals_1_HttpAndRKDToken.wsdl



25.3 Get Asset Details Analysis SP (GetAssetDetailsAnalysisSP_1)

You can use the GetAssetDetailsAnalysisSP_1 method to retrieve asset analysis details (performance calculations) for the specified asset(s).

A performance calculation is a calculation that measures fund's past performance.

The example below gets asset analysis details for the asset with '60003333' LipperID expressed in US dollars and displayed in English language.

XML Sample Request - Getting Asset Details Analysis SP

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetAssetDetailsAnalysisSP_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetAssetDetailsAnalysisSP_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <lipperID>60003333</lipperID>
      <currencyCode>USD</currencyCode>
      <language>English</language>
    </GetAssetDetailsAnalysisSP_Request_1>
  </Body>
</Envelope>
```

Parameter	Description
lipperID	A unique eight- or nine-digit number that identifies an asset.
currencyCode	The display currency for the returned data. For full listing of available currency codes, see section Currency Code Enumeration in the Lipper Data Enumerations chapter.
language	The display language for the returned data.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

The response returns the analysis details for the specified asset ('60003333'):

XML Sample Response - Getting Asset Details Analysis SP

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetAssetDetailsAnalysisSP_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetAssetDetailsAnalysisSP_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <AssetDetailsAnalysisSPResult>
        <AssetDetailsAnalysisSPTType>
          <LipperId>11005483</LipperId>
          <Language>English</Language>
          <Name>MSCI World/Health Care TR</Name>
          <BenchmarkCategory>AssetManager</BenchmarkCategory>
        </AssetDetailsAnalysisSPTType>
      </AssetDetailsAnalysisSPResult>
    </GetAssetDetailsAnalysisSP_Response_1>
  </s:Body>
</s:Envelope>
```



```

    <PerformanceCalculationList>
      <PerformanceCalculationItem>
        <CurrencyCode>USD</CurrencyCode>
        <StatTypeId>26593</StatTypeId>
        <Estimate>>false</Estimate>
        <StartDate>1999-03-31</StartDate>
        <EndDate>2009-03-31</EndDate>
        <CalcPeriodName>Max Drawdown</CalcPeriodName>
        <Language>English</Language>
        <Value>-35.24138</Value>
        <CalculationType>MaxDrawdownfor10YearstoLastMonthEnd</CalculationType>
      </PerformanceCalculationItem>
      ...
    <AssetDetailsAnalysisSPTType>
      <LipperId>60003333</LipperId>
      <Language>English</Language>
      <Name>Janus Global Life Sciences EUR A Acc</Name>
      <BenchmarkCategory xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
    </AssetDetailsAnalysisSPTType>
    <PerformanceCalculationList>
      <PerformanceCalculationItem>
        <CurrencyCode>USD</CurrencyCode>
        <StatTypeId>26589</StatTypeId>
        <Estimate>>false</Estimate>
        <StartDate>2004-03-31</StartDate>
        <EndDate>2009-03-31</EndDate>
        <CalcPeriodName>Alpha</CalcPeriodName>
        <Language>English</Language>
        <Value>0.25717</Value>
        <CalculationType>Alphafor5YearstoLastMonthEnd</CalculationType>
      </PerformanceCalculationItem>
      ....
      <PerformanceCalculationItem>
        <CurrencyCode>USD</CurrencyCode>
        <StatTypeId>26601</StatTypeId>
        <Estimate>>false</Estimate>
        <StartDate>2004-03-31</StartDate>
        <EndDate>2009-03-31</EndDate>
        <CalcPeriodName>Treynor Ratio</CalcPeriodName>
        <Language>English</Language>
        <Value>-0.34437</Value>
        <CalculationType>TreynorRatiofor5YearstoLastMonthEnd</CalculationType>
      </PerformanceCalculationItem>
    </PerformanceCalculationList>
  </AssetDetailsAnalysisSPTType>
</AssetDetailsAnalysisSPResult>
</GetAssetDetailsAnalysisSP_Response_1>
</Body>
</Envelope>

```

Element	Description
LipperId	The Lipper ID for the asset's benchmark fund.
Language	The display language for the asset analysis data.
Name	The benchmark index fund's name.
BenchmarkCategory	The benchmark category for the benchmark identified in LipperId.
PerformanceCalculationsList	The asset's performance calculation list. Can have the following values: • CurrencyCode - the currency code that represents the currency of the performance calculation data. • StatTypeId - the stat type id. StatTypeId is a simple numeric reference identifier used to identify the various statistics and calculations available through the service. • Estimate - a flag that indicates if the value of this performance calculation is an estimate. • StartDate - the start date for the time period used for the performance calculation. • EndDate - the end date for the time period used for the performance calculation. • CalcPeriodName - the name of the performance calculation. • Language - the Language ID that represents the display language for the performance calculation data. • Value - the value of the performance calculation. • CalculationType - the type of the calculation.



25.4 Get Asset Details Attributes (GetAssetDetailsAttributes_1)

Use the GetAssetDetailsAttributes_1 method to retrieve a detailed list of attributes for the specified asset(s). Attributes are basic characteristics of a fund, like asset type, status, universe, etc.

The example below requests attributes for the asset with '65028707' LipperID and to be displayed in English language.

XML Sample Request - Getting Asset Details Attributes

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetAssetDetailsAttributes_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetAssetDetailsAttributes_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <lipperID>65028707</lipperID>
      <language>English</language>
    </GetAssetDetailsAttributes_Request_1>
  </Body>
</Envelope>
```

Parameter	Description
lipperID	A unique eight- or nine-digit number that identifies an asset.
language	The display language for the returned data.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

The response returns a detailed list of attributes for the specified asset:

XML Sample Response - Getting Asset Details Attributes

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetAssetDetailsAttributes_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetAssetDetailsAttributes_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <AssetDetailsAttributesResult>
        <RegisteredCountryOfSale>
          <RegisteredCountryOfSaleType>
            <LipperID>65028707</LipperID>
            <CountryList>
              <CountryType>
                <CountryID>895</CountryID>
                <Language>English</Language>
                <CountryName>Korea</CountryName>
                <CountryCode>KOR</CountryCode>
              </CountryType>
            </CountryList>
          </RegisteredCountryOfSaleType>
        </RegisteredCountryOfSale>
      </AssetDetailsAttributesResult>
    </GetAssetDetailsAttributes_Response_1>
  </s:Body>
</s:Envelope>
```



```

    </RegisteredCountryOfSaleType>
  </RegisteredCountryOfSale>
  <Flags>
    <FlagType>
      <LipperId>65028707</LipperId>
      <Language>English</Language>
      <FlagList>
        <FlagItem>
          <FlagId>1354</FlagId>
          <FlagName>Linked Fund</FlagName>
          <FlagCode>Y</FlagCode>
          <FlagValue>Yes</FlagValue>
        </FlagItem>
        ...
      </FlagList>
    </FlagType>
  </Flags>
  <Attributes>
    <AttributeType>
      <LipperId>65028707</LipperId>
      <AttributeList>
        <AttributeItem>
          <Language>English</Language>
          <ValueId>1276</ValueId>
          <ValueName>Valuation / Pricing Frequency</ValueName>
          <ValueCode>PRDAILY</ValueCode>
          <Value>Pricing Daily, Mon-Fri</Value>
        </AttributeItem>
        ...
        <AttributeItem>
          <Language>English</Language>
          <ValueId>1083</ValueId>
          <ValueName>Geographical Focus</ValueName>
          <ValueCode>KOR</ValueCode>
          <Value>Korea</Value>
        </AttributeItem>
      </AttributeList>
    </AttributeType>
  </Attributes>
  <Domicile>
    <DomicileType>
      <LipperId>65028707</LipperId>
      <Language>English</Language>
      <DomicileId>326</DomicileId>
      <DomicileCode>KOR</DomicileCode>
      <DomicileName>Korea (Republic of)</DomicileName>
    </DomicileType>
  </Domicile>
  <GuaranteeAsset>
    <GuaranteeAssetType>
      <LipperId>65028707</LipperId>
      <Guarantee xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
      <MaturityDate xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
    </GuaranteeAssetType>
  </GuaranteeAsset>
</AssetDetailsAttributesResult>
</GetAssetDetailsAttributes_Response_1>
</Body>
</Envelope>

```

Attributes returned by this method include valuation and pricing frequency, domicile, flags, registered country of sale, and guarantee asset:

Element	Description
RegisteredCountryOfSale	The asset's registered country of sale information. Contains the following sub-elements: • LipperID - an eight- or nine-digit number that identifies an asset. • CountryList - the list of countries where the asset is registered for sale. Contains the following sub-attributes: • CountryId - the country's numerical Country ID. • Language - the display language for the country information. • CountryName - the name of the country.



	• CountryCode - the alphabetic country code.
Flags	The asset's flags. Can have the following sub-attributes: • LipperID - an eight- or nine-digit number that identifies an asset. • Language - the display language for the flag list. • FlagList - the asset's list of flags and values. There are a large number of flags available in the Lipper database, but not all flags apply for all assets. An example would be "exchanged listed". Can have the following sub-elements: • FlagId - the numeric flag ID. • FlagName - the name of the flag. • FlagCode - the alphabetic flag code. • FlagValue - the flag value, which is either Yes or No. If the value of this flag is yes, then the fund is listed on an exchange.
Attributes	The asset's attribute list. Can have the following sub-attributes: • LipperID - an eight- or nine-digit number that identifies an asset. • AttributeList - the asset's attribute list that includes all of the asset's available attributes and associated values. Contains the following sub-attributes: • Language - the display language for the attribute information. • ValueId - the numeric attribute value ID. • ValueName - the name of the attribute value. • ValueCode - the alphabetic attribute value code. • Value - the attribute value.
Domicile	The asset's domicile data. Can have the following sub-attributes: • LipperID - an eight- or nine-digit number that identifies an asset. • Language - the display language for the domicile information. • DomicileId - the numerical Domicile ID that represents the asset's domicile. • DomicileCode - the alphabetic Domicile Code (e.g., GBR) that represents the asset's domicile. • DomicileName - the name of the domicile.
GuaranteeAsset	The asset's guarantee data. Can have the following sub-attributes: • LipperID - an eight- or nine-digit number that identifies an asset. • Guarantee - the asset's guarantee percentage. • MaturityDate - the guarantee's maturity date.

25.5 Get Asset Details Financial Advanced (GetAssetDetailsFinancialAdvanced_1)

Use the GetAssetDetailsFinancialAdvanced_1 method to retrieve financial details for the specified asset(s).

The example below gets financial details for the asset with '65028707' LipperID expressed in Euro and displayed in English language.

XML Sample Request - Getting Asset Details Financial Advanced

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetAssetDetailsFinancialAdvanced_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetAssetDetailsFinancialAdvanced_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <lipperID>65028707</lipperID>
      <language>English</language>
      <currencyCode>EUR</currencyCode>
    </GetAssetDetailsFinancialAdvanced_Request_1>
  </Body>
</Envelope>
```



Parameter	Description
lipperID	A unique eight- or nine-digit number that identifies an asset.
currencyCode	The display currency for the returned data. For full listing of available currency codes, see section Currency Code Enumeration in the Lipper Data Enumerations chapter.
language	The display language for the returned data.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

The response returns financial details for the specified asset:

XML Sample Response - Getting Asset Details Financial Advanced

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/
    GetAssetDetailsFinancialAdvanced_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetAssetDetailsFinancialAdvanced_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/
    LipperFundamentals_1">
      <AssetDetailsFinancialResult>
        <Income>
          <IncomeType>
            <LipperId>65028707</LipperId>
            <Distribution>Paid</Distribution>
            <DefaultTax>Gross</DefaultTax>
            <IncomeIsInterest>false</IncomeIsInterest>
            <CanReInvestIncome>true</CanReInvestIncome>
            <UKNet xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
            <Gross>true</Gross>
            <CanWithdrawIncome xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
            <DistributionType>Paid</DistributionType>
            <DefaultTaxBasis>Gross</DefaultTaxBasis>
          </IncomeType>
        </Income>
        <Charges>
          <ChargesType>
            <LipperId>65028707</LipperId>
            <Name>Hana UBS FC LG Elec / Samsung Fire Derivatives 1</Name>
            <ChargesList>
              <ChargesItem>
                <DataDate>1800-01-01</DataDate>
                <ChargeId>777</ChargeId>
                <ChargeName>Initial</ChargeName>
                <Minimum xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
                <Maximum xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
                <Actual>0</Actual>
              </ChargesItem>
              ...
            </ChargesList>
          </ChargesType>
        </Charges>
        <EUTaxPercentages/>
        <TotalNetAssets>
          <TotalNetAssetType>
            <LipperId>65028707</LipperId>
            <TotalNetAssetList>
              <TotalNetAssetItem>
                <DataDate>2007-09-28</DataDate>
                <CurrencyCode>EUR</CurrencyCode>
                <TotalNetAssets>9141186.076</TotalNetAssets>
                <TotalNetAssetsInMillions>9.1411861</TotalNetAssetsInMillions>
              </TotalNetAssetItem>
              ...
            </TotalNetAssetList>
          </TotalNetAssetType>
        </TotalNetAssets>
      </AssetDetailsFinancialResult>
    </GetAssetDetailsFinancialAdvanced_Response_1>
  </s:Body>
</s:Envelope>
```



```

        </TotalNetAssetList>
    </TotalNetAssetType>
</TotalNetAssets>
<MinimumInvestments/>
<Yield/>
<Zwist/>
</AssetDetailsFinancialResult>
</GetAssetDetailsFinancialAdvanced_Response_1>

</Body>
</Envelope>

```

Element	Description
Income	The asset's income data. Contains the following sub-attributes: • LipperId - the Lipper ID is an eight- or nine-digit number that represents an asset. • Distribution - the type of distribution for the income, either paid or retained. • DefaultTax - the default tax basis. The default tax basis tells whether the income will be stored on a Gross or UK Net tax basis. • IncomeIsInterest - a flag that indicates if more than 60% of the fund is invested in bond or income securities and is, therefore, taxed at a different rate. • CanReInvestIncome - a flag that indicates if the appropriate income data has been collected and stored in the Lipper database to enable the reinvested income calculation. • UKNet - a flag that indicates if the income is reinvested on a net basis. • Gross - a flag that indicates if the income is reinvested on a gross basis. • CanWithdrawIncome - a flag that indicates if the appropriate income data has been collected and stored in the Lipper database to enable the withdraw income calculation. • DistributionType - the IncomeDistribution ID that represents the Income Distribution type for the Income type. • DefaultTaxBasis - the Tax Id that represents the Tax Status for the Income type.
Charges	The assets charges data. Contains the following sub-attributes: • LipperId - the Lipper ID is an eight- or nine-digit number that represents an asset. • Name - the asset name. • ChargesList - the list of all the charges for the asset. Contains the following sub-attributes: • DataDate - the data date for the charge. • ChargeId - the ID of the charge item. • ChargeName - the name of the charge. • Minimum - the minimum charge for the charge item. • Maximum - the maximum charge for the charge item. • Actual - the actual charge for the item.
EUTaxPercentages	The asset's EU tax percentages data. Contains the following elements: • LipperId - the asset's Lipper ID. • DataDate - the date for which the EU Tax information is valid. • EUTaxStartDate - the tax period start date. • EUTaxEndDate - the tax period end date. • EUTaxPercent - The percentage of the fund's assets that are invested in debt claims with non-grandfathered status.
TotalNetAssets	The asset's total net assets (TNA) details. Contains the following sub-elements: • LipperId - the Lipper ID is an eight- or nine-digit number that represents an asset. • TotalNetAssetList - the asset's list of TNA values. Contains the following sub-attributes: • DataDate - the date for which the TNA value is valid. • CurrencyCode - the currency code that represents the currency for the TNA value. • TotalNetAssets - the TNA value for the stated data date. • TotalNetAssetsInMillions - the TNA value in millions for the stated data date.
MinimumInvestments	The asset's minimum investment data. A Minimum Investment is a minimum number of shares or currency amount that investors must purchase. Contains the following elements: • LipperId - the asset's Lipper ID. • Language - the display language for the minimum investment data. • StartDate - the minimum investment start date. • EndDate - the minimum investment end date. • CurrencyCode - the display currency for the minimum investment data. • Name - the name of the asset. • MinimumInvestmentTypeId - the ID of the minimum investment type. • MinimumInvestmentInitial - minimum number of shares or currency amount that investors must initially purchase.



	• MinimumInvestmentRegular - minimum amount of investment accepted on a regular basis, like to be part of regular savings plan. • MinimumInvestmentIRRegular - minimum number of shares or currency amount that investors can subsequently invest (on an ad hoc basis) in the fund after initial shares are purchased. • MinimumInvestmentInitialShare - the minimum initial share investment amount.
Yield	The asset's yield (return on investment) data. Yield represents a single yield value for an asset. Contains the following elements: • LipperId - the asset's Lipper ID. • YieldList - the asset's yield data. Contains the following elements: • DataDate - the date for which the yield data is valid. • Name - the name of the yield type. There are four available yield types: overall, one-year, five-year, and ten-year. • Value - the yield's value. • YieldTypeId - the yield type's ID.
Zwist	The asset's zwist data. Zwist is the percentage of a German fund's distributions that are refundable to investors as a result of corporate income and withholding taxes paid by the fund. Contains the following elements: • LipperId - the asset's Lipper ID. • DataDate - the date for which zwist data is valid. • Zwist - the Zwist value. • MaxDate - the date at which zwist expires. • CurrencyCode - the display currency for zwist data.

25.6 Get Asset Details Financial Basic (GetAssetDetailsFinancialBasic_1)

Use the GetAssetDetailsFinancialBasic_1 method to retrieve basic financial information for the given asset(s).

The example below gets financial details for the asset with '65028707' LipperID expressed in Euro and displayed in English language.

XML Sample Request - Getting Asset Details Financial Basic

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetAssetDetailsFinancialBasic_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetAssetDetailsFinancialBasic_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <lipperID>65028707</lipperID>
      <language>English</language>
      <currencyCode>EUR</currencyCode>
    </GetAssetDetailsFinancialBasic_Request_1>
  </Body>
</Envelope>
```

Parameter	Description
lipperID	A unique eight- or nine-digit number that identifies an asset.
currencyCode	The display currency for the returned data. For full listing of available currency codes, see section Currency Code Enumeration in the Lipper Data Enumerations chapter.
language	The display language for the returned data.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.



The response returns the following financial information for the specified asset:

XML Sample Response - Getting Asset Details Financial Basic

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/
    GetAssetDetailsFinancialBasic_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetAssetDetailsFinancialBasic_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <AssetDetailsFinancialBasicResult>
        <Income>
          <IncomeType>
            <LipperId>65028707</LipperId>
            <Distribution>Paid</Distribution>
            <DefaultTax>Gross</DefaultTax>
            <IncomeIsInterest>false</IncomeIsInterest>
            <CanReInvestIncome>true</CanReInvestIncome>
            <UKNet xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
            <Gross>true</Gross>
            <CanWithdrawIncome xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
            <DistributionType>Paid</DistributionType>
            <DefaultTaxBasis>Gross</DefaultTaxBasis>
          </IncomeType>
        </Income>
        <Charges>
          <ChargesType>
            <LipperId>65028707</LipperId>
            <Name>Hana UBS FC LG Elec / Samsung Fire Derivatives 1</Name>
            <ChargesList>
              <ChargesItem>
                <DataDate>1800-01-01</DataDate>
                <ChargeId>777</ChargeId>
                <ChargeName>Initial</ChargeName>
                <Minimum xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
                <Maximum xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
                <Actual>0</Actual>
              </ChargesItem>
              ...
            </ChargesList>
          </ChargesType>
        </Charges>
        <EUTaxPercentages/>
        <TotalNetAssets>
          <TotalNetAssetType>
            <LipperId>65028707</LipperId>
            <TotalNetAssetList>
              <TotalNetAssetItem>
                <DataDate>2007-09-28</DataDate>
                <CurrencyCode>EUR</CurrencyCode>
                <TotalNetAssets>9141186.076</TotalNetAssets>
                <TotalNetAssetsInMillions>9.1411861</TotalNetAssetsInMillions>
              </TotalNetAssetItem>
            </TotalNetAssetList>
          </TotalNetAssetType>
        </TotalNetAssets>
        <MinimumInvestments/>
        <Yield/>
        <Zwist/>
      </AssetDetailsFinancialBasicResult>
    </GetAssetDetailsFinancialBasic_Response_1>
  </s:Body>
</Envelope>
```



Element	Description
Income	The asset's income data. Contains the following sub-attributes: • LipperId - the Lipper ID is an eight- or nine-digit number that represents an asset. • Distribution - the type of distribution for the income, either paid or retained. • DefaultTax - the default tax basis. The default tax basis tells whether the income will be stored on a Gross or UK Net tax basis. • IncomeIsInterest - a flag that indicates if more than 60% of the fund is invested in bond or income securities and is, therefore, taxed at a different rate. • CanReInvestIncome - a flag that indicates if the appropriate income data has been collected and stored in the Lipper database to enable the reinvested income calculation. • UKNet - a flag that indicates if the income is reinvested on a net basis. • Gross - a flag that indicates if the income is reinvested on a gross basis. • CanWithdrawIncome - a flag that indicates if the appropriate income data has been collected and stored in the Lipper database to enable the withdraw income calculation. • DistributionType - the IncomeDistribution ID that represents the Income Distribution type for the Income type. • DefaultTaxBasis - the Tax Id that represents the Tax Status for the Income type.
Charges	The assets charges data. Charges are fees associated with investing in the fund which are incurred by investors. Contains the following sub-attributes: • LipperId - the Lipper ID is an eight- or nine-digit number that represents an asset. • Name - the asset name. • ChargesList - the list of all the charges for the asset. Contains the following sub-attributes: • DataDate - the data date for the charge. • ChargeId - the ID of the charge item. • ChargeName - the name of the charge. • Minimum - the minimum charge for the charge item. • Maximum - the maximum charge for the charge item. • Actual - the actual charge for the item.
EUTaxPercentages	The asset's EU tax percentages data. Contains the following elements: • LipperId - the asset's Lipper ID. • DataDate - the date for which the EU Tax information is valid. • EUTaxStartDate - the tax period start date. • EUTaxEndDate - the tax period end date. • EUTaxPercent - the percentage of the given funds' assets that are invested in debt claims with non-grandfathered status.
TotalNetAssets	The asset's total net assets (TNA) details. Contains the following sub-attributes: • LipperId - the Lipper ID is an eight- or nine-digit number that represents an asset. • TotalNetAssetList - the asset's list of TNA values. Contains the following sub-attributes: • DataDate - the date for which the TNA value is valid. • CurrencyCode - the currency code that represents the currency for the TNA value. • TotalNetAssets - the TNA value for the stated data date. • TotalNetAssetsInMillions - the TNA value in millions for the stated data date.
MinimumInvestments	The asset's minimum investment data. A Minimum Investment is a minimum number of shares or currency amount that investors must purchase. Contains the following elements: • LipperId - the asset's Lipper ID. • Language - the display language for the minimum investment data. • StartDate - the minimum investment start date. • EndDate - the minimum investment end date. • CurrencyCode - the display currency for the minimum investment data. • Name - the name of the asset. • MinimumInvestmentTypeId - the ID of the minimum investment type. • MinimumInvestmentInitial - minimum number of shares or currency amount that investors must initially purchase. • MinimumInvestmentRegular - minimum amount of investment accepted on a regular basis, like to be part of regular savings plan. • MinimumInvestmentIRRegular - minimum number of shares or currency amount that investors can subsequently invest (on an ad hoc basis) in the fund after initial shares are purchased. • MinimumInvestmentInitialShare - the minimum initial share investment amount.
Yield	The asset's yield (return on investment) data. Yield represents a single yield value for an asset. Contains the following elements: • LipperId - the asset's Lipper ID. • YieldList - the asset's yield data. Contains the following elements: • DataDate - the date for which the yield data is valid.



	• Name - the name of the yield type. There are four available yield types: overall, one-year, five-year, and ten-year. • Value - the yield's value. • YieldTypeId - the yield type's ID.
Zwist	The asset's zwist data. Zwist is the percentage of a German fund's distributions that are refundable to investors as a result of corporate income and withholding taxes paid by the fund. Contains the following elements: • LipperId - the asset's Lipper ID. • DataDate - the date for which zwist data is valid. • Zwist - the Zwist value. • MaxDate - the date at which zwist expires. • CurrencyCode - the display currency for zwist data.

25.7 Get Asset Details Overview Basic (GetAssetDetailsOverviewBasic_1)

Use the GetAssetDetailsOverviewBasic_1 method to retrieve asset details for the given asset(s).

The example below gets financial details for the asset with '65028707' LipperID and displayed in English language.

XML Sample Request - Getting Asset Details Overview Basic

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetAssetDetailsOverviewBasic_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetAssetDetailsOverviewBasic_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <lipperID>65028707</lipperID>
      <language>English</language>
    </GetAssetDetailsOverviewBasic_Request_1>
  </Body>
</Envelope>
```

Parameter	Description
lipperID	A unique eight- or nine-digit number that identifies an asset.
language	The display language for the returned data.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

The response returns asset details for the specified asset. Asset details include benchmarks, classification schemes, cross references, currencies, IPO information, asset identity, manager, objectives, asset relationships, successions, support companies, and umbrella funds.

XML Sample Response - Getting Asset Details Overview Basic

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetAssetDetailsOverviewBasic_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
```



```

    <Date>2009-04-17T10:41:48.639875Z</Date>
    <DoNotStore />
  </CacheResponse>
  <a:RelatesTo>[MessageID]</a:RelatesTo>
</s:Header>
<s:Body>
  <GetAssetDetailsOverviewBasic_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
    <AssetDetailsOverviewBasicResult>
      <Identity>
        <LipperId>65028707</LipperId>
        <Language>English</Language>
        <FullName>Hana UBS FC LG Elec / Samsung Fire Derivatives 1</FullName>
        <ShortName>Hana UBS FC LGE/SamsungFireDe1</ShortName>
        <NickName/>
      </Identity>
      <Manager>
        <ManagerType>
          <LipperId>65028707</LipperId>
          <ManagerName>Team-managed</ManagerName>
          <StartDate>2006-04-24</StartDate>
          <EndDate>4000-01-01</EndDate>
        </ManagerType>
      </Manager>
      <SupportCompany>
        <SupportCompaniesType>
          <CompanyRole>Administrator</CompanyRole>
          <CompanyType>
            <Language>English</Language>
            <CompanyId>1276096</CompanyId>
            <CompanyFullName>HSBC Fund Service</CompanyFullName>
            <LipperId>65028707</LipperId>
            <CompanyCode>105628003</CompanyCode>
            <CompanyShortName>HSBC Fund Service</CompanyShortName>
            <BusinessName>Finance</BusinessName>
            <ContactInformation>
              <AddressLine1>6F Kyobo Sec. B/D</AddressLine1>
              <AddressLine2>26-4 Yeoido-dong Youngdungpo-go</AddressLine2>
              <AddressLine3>Seoul Korea</AddressLine3>
              <AddressLine4/>
              <City/>
              <Postcode/>
              <Telephone>(82) 2 3771 9824</Telephone>
              <Fax>(82) 2 3771 9900</Fax>
              <Email>kms111@amtek.co.kr</Email>
              <WebsiteUrl>
                <Fragment/>
                <Host>www.amtek.co.kr</Host>
                <Password/>
                <Path>/</Path>
                <Port>80</Port>
                <Query/>
                <Scheme>http</Scheme>
                <UserName/>
              </WebsiteUrl>
              <Url>http://www.amtek.co.kr</Url>
              <Host>www.amtek.co.kr</Host>
            </ContactInformation>
          </CompanyType>
        </SupportCompaniesType>
      </SupportCompany>
      ...
    </SupportCompany>
    <IPOInfo>
      <LipperId>65028707</LipperId>
      <LaunchDate>2006-04-24</LaunchDate>
      <CurrencyCode>KRW</CurrencyCode>
      <IPOValue xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
      <IPODate xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
      <Nav>1000</Nav>
      <Bid xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
      <Offer xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
      <Mid xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
    </IPOInfo>
    <BenchmarkList>
      <BenchmarkItem>
        <Language>English</Language>

```



```

    <BenchmarkId>11026143</BenchmarkId>
    <BenchmarkName>Korean Treasury 1 Year</BenchmarkName>
    <BenchmarkCategory>RiskFreeIndex</BenchmarkCategory>
  </BenchmarkItem>
  ...
  <Succession>
    <SuccessionType>
      <LipperId>65028707</LipperId>
      <SuccessionKind/>
      <SuccessionDate>2007-10-29</SuccessionDate>
    </SuccessionType>
  </Succession>
  <Objective>
    <LipperId>65028707</LipperId>
    <Language>English</Language>
    <ObjectiveText>This fund aims to achieve stable interest income and capital growth.</ObjectiveText>
    <DataDate>1800-01-01</DataDate>
  </Objective>
  <Primary>
    <AssetRelationType>
      <LipperId>65028707</LipperId>
      <ParentId>65028707</ParentId>
      <AssetRelationList>
        <AssetIdentityType>
          <LipperId>65028707</LipperId>
          <Language>English</Language>
          <Name>Hana UBS FC LG Elec / Samsung Fire Derivatives 1</Name>
        </AssetIdentityType>
      </AssetRelationList>
    </AssetRelationType>
  </Primary>
  <Umbrella/>
  <Classification>
    <ClassSchemeType>
      <ClassSchemeId>6052</ClassSchemeId>
      <ClassSchemeCode>UNCLASS</ClassSchemeCode>
      <ClassSchemeName>Lipper Global</ClassSchemeName>
      <Language>English</Language>
      <ClassList>
        <ClassType>
          <ClassId>6218</ClassId>
          <ClassName>Unclassified</ClassName>
          <Language>English</Language>
        </ClassType>
      </ClassList>
      <LipperId>65028707</LipperId>
    </ClassSchemeType>
    ...
  </Classification>
  <Currency>
    <CurrencyId>10000040</CurrencyId>
    <Language>English</Language>
    <CurrencyCode>KRW</CurrencyCode>
    <Name>South Korean Won</Name>
  </Currency>
  <Status>
    <StatusType>
      <LipperId>65028707</LipperId>
      <Language>English</Language>
      <AssetTypeName>Fund</AssetTypeName>
      <AssetStatus>Liquidated</AssetStatus>
    </StatusType>
  </Status>
  </AssetDetailsOverviewBasicResult>
</GetAssetDetailsOverviewBasic_Response_1>
</Body>
</Envelope>

```

Element	Description
Identity	the asset's identity details, which includes the fund's full name, nickname, and short name. Contains the following elements: LipperId - the asset's Lipper ID. The Lipper ID is an eight- or nine-digit number that represents an



	asset. • Language - the Language ID that represents the language for the asset information. • FullName - the asset's full name. • ShortName - the asset's short name. • NickName - the asset's nickname. • PrivateFundCode - the private fund code. Private Fund Code refers to an identifier that is a possibility within the CrossReferenceCodes list. This value will be available only for private funds.
Manager	The asset's manager details. Contains the following elements: • LipperId - the asset's Lipper ID. • ManagerName - the asset manager's name. • StartDate - the asset manager's start date. The year the manager of the fund started managing the fund. • EndDate - the asset manager's end date. The year the manager of the fund finished managing the fund.
SupportCompany	The asset's support company details. Support Companies refer to the various entities which provide key services to the overall operation of the fund. For example, the Fund Management Company supports the fund by providing the talent necessary to pick investments for the fund. It contains the following elements: • CompanyRole - the company role. • CompanyType - the asset's general company details. • Language - the display language for the support company information. • CompanyId - the company's numeric ID. • CompanyFullName - the company's full name. • LipperId - the asset's Lipper ID. • CompanyCode - the company's alphabetic code. • CompanyShortName - the company's short name. • BusinessName - the type of business in which the company engages. • ContactInformation - the company's contact information (address, phone and fax numbers, e-mail, Web-site URL and host).
IPOInfo	The asset's Initial Public Offering (IPO) details. Initial Public Offering is when a company issues company's stock shares to the public or interested investors. Contains the following elements: • LipperId - the asset's Lipper ID. • LaunchDate - the fund's launch date, which is the date that the subscription period for the fund ends. • CurrencyCode - the currency of the fund's base launch currency. • IPOValue - the share value of the fund on the IPO date. • IPODate - the date of the fund's IPO. • Nav - the share value at the fund's first valuation with any shareholders. • Bid - the Bid value, which is the first pricing of the fund after the subscription period is over minus the fund's redemption fees. • Offer - the launch offer, which is the first pricing of the fund after the subscription period is over plus the fund's initial sales charge. • Mid - the fund's first mid pricing after the subscription period is over (i.e., the mid-point between the bid and the offer).
BenchmarkList	The asset's benchmark details. Contains the following elements: • Language - the Language ID that represents the language for the benchmark information. • BenchmarkId - the Benchmark ID. • BenchmarkName - the benchmark name. • BenchmarkCategory - the benchmark category.
Succession	The asset's successor details. Contains the following elements: • LipperId - the asset's Lipper ID. • SuccessionKind - the type of succession. • SuccessionDate - the succession date. • Successor - the name of the surviving fund in a fund merger.
Objective	The asset's objective details. Contains the following elements: • LipperId - the asset's Lipper ID. • Language - the Language ID. • ObjectiveText - the objective text, which is based up on information supplied in the fund's prospectus. • DataDate - the date of the objective.
Primary	The assets primary fund details. A primary fund is the primary fund for a fund series with multiple share classes for the same portfolio of investments. Contains the following elements: • LipperId - the asset's Lipper ID. • ParentId - the Lipper ID of the parent fund of which the asset is a member.



	• AssetRelationList - the list of assets that are members of the same umbrella fund as this asset. • ParentRIC - the RIC of the parent fund.
Umbrella	The asset's umbrella fund details. Umbrella fund refers typically to Insurance Funds where a single fund acts as the central repository for assets and various sub-funds – each with unique characteristics such as fees or benefits, then feeds the invested assets to the umbrella. The umbrella fund itself is not available to be invested in. Contains the following elements: • LipperId - the asset's Lipper ID. • ParentId - the Lipper ID of the parent fund of which the asset is a member. • AssetRelationList - the list of assets that are members of the same umbrella fund as this asset. • ParentRIC - the RIC of the parent fund.
Classification	The asset's classification scheme details. Contains the following elements: • ClassSchemeId - the classification scheme's numeric ID. • ClassSchemeCode - the classification scheme's numeric code. • ClassSchemeName - the name of the classification scheme. • Language - the display language for classification data. • ClassList - the asset's classification list for the classification scheme. Contains the following sub-elements: • ClassId - the classification type's numeric ID. • ClassName - the name of the classification type. • Language - the display language for classification data. • LipperId - the asset's Lipper ID.
Currency	The asset's currency details. Contains the following elements: • CurrencyId - the numeric Currency ID. • Language - the Language ID that represents the language for the currency. • CurrencyCode - the alphabetic currency code. • Name - the name of the currency.
Status	The asset's status details. Contains the following elements: • LipperId - the asset's Lipper ID. • Language - the language that represents the language for the benchmark information. • AssetTypeName - the name of asset type. • AssetStatus - the current status of the asset. A status can be one of the following: - o Active - o Liquidated - o Pending - o Deleted - o Merged - o Suspended - o Withdrawn - o Dormant - o ProForma

25.8 Get Asset Details Prices Basic (GetAssetDetailsPricesBasic_1)

Use the GetAssetDetailsPricesBasic_1 method to retrieve listed prices for the given asset(s).

The example below gets prices for the asset with '65028707' LipperID expressed in Euros and displayed in English language.

XML Sample Request - Getting Asset Details Prices Basic

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetAssetDetailsPricesBasic_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetAssetDetailsPricesBasic_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
```




```
<lipperID>65028707</lipperID>
<language>English</language>
<currencyCode>EUR</currencyCode>
</GetAssetDetailsPricesBasic_Request_1>
```

```
</Body>
</Envelope>
```

Parameter	Description
lipperID	A unique eight- or nine-digit number that identifies an asset.
currencyCode	The display currency for the returned data. For full listing of available currency codes, see section Currency Code Enumeration in the Lipper Data Enumerations chapter.
language	The display language for the returned data.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

The response returns the following price information for the specified asset:

XML Sample Response - Getting Asset Details Prices Basic

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/
    GetAssetDetailsPricesBasic_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetAssetDetailsPricesBasic_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <AssetDetailsPricesBasicResult>
        <LipperId>65028707</LipperId>
        <StartDate>2006-04-24</StartDate>
        <EndDate>2009-04-20</EndDate>
        <PriceList>
          <PriceItem>
            <DataDate>2007-10-29</DataDate>
            <CurrencyCode>EUR</CurrencyCode>
            <Nav>0.9525901</Nav>
            <NavEstimated>false</NavEstimated>
            <Offer xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
            <OfferEstimated xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
            <Bid xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
            <BidEstimated xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
            <Mid xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
            <MidEstimated xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
          </PriceItem>
        </PriceList>
      </AssetDetailsPricesBasicResult>
    </GetAssetDetailsPricesBasic_Response_1>
  </s:Body>
</Envelope>
```

Element	Description
DataDate	The date for which the price is valid.
CurrencyCode	The currency for the price data.
Nav	The net asset value price, which is the dollar value of a single mutual fund share, based on the value of the underlying assets of the fund minus its liabilities, divided by the number of outstanding shares.
NavEstimated	A flag that indicates if a calculated net asset value price was not supplied by the data provider so that an estimated value was used instead.



Offer	The offer price, which is the net asset value plus initial sales charges.
OfferEstimated	A flag that indicates if a calculated offer value was not supplied by the data provider so that an estimated value was used instead.
Bid	The bid price, which is the net asset value minus redemption charges.
BidEstimated	A flag that indicates if a calculated bid value was not supplied by the data provider so that an estimated value was used instead.
Mid	The mid price of the fund after the subscription period is over. This is the mid point between the bid and the offer.
MidEstimated	A flag that indicates if a calculated mid value was not supplied by the data provider so that an estimated value was used instead.

25.9 Get Asset Details Ratings (GetAssetDetailsRatings_1)

Use the GetAssetDetailsRatings_1 method to retrieve all of the Lipper Leader scores for the given asset(s).

The example below gets Lipper Leader scores for the asset with '60003333' LipperID displayed in English language.

XML Sample Request - Getting Asset Details Ratings

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperFundamentals/LipperFundamentals.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetAssetDetailsRatings_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetAssetDetailsRatings_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <lipperID>60003333</lipperID>
      <language>English</language>
    </GetAssetDetailsRatings_Request_1>
  </Body>
</Envelope>
```

Parameter	Description
lipperID	A list of one or more Lipper IDs for which data will be returned. A Lipper ID is a unique eight- or nine-digit number that identifies an asset.
language	The display language for the returned data.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

The response returns Lipper Leader scores for the specified asset:

XML Sample Response - Getting Asset Details Ratings

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1/GetAssetDetailsRatings_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
  </s:Header>
  <s:Body>
    <GetAssetDetailsRatings_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
      <lipperID>60003333</lipperID>
      <language>English</language>
      <Offer>10.12</Offer>
      <OfferEstimated>false</OfferEstimated>
      <Bid>10.10</Bid>
      <BidEstimated>false</BidEstimated>
      <Mid>10.11</Mid>
      <MidEstimated>false</MidEstimated>
    </GetAssetDetailsRatings_Response_1>
  </s:Body>
</s:Envelope>
```



```

<a:RelatesTo>[MessageID]</a:RelatesTo>
</s:Header>
<s:Body>
  <GetAssetDetailsRatings_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperFundamentals_1">
    <AssetDetailsRatingsResult>
      <LipperId>60003333</LipperId>
      <UniverseList>
        <UniverseType>
          <UniverseId>5681</UniverseId>
          <Language>English</Language>
          <UniverseCode>GBR</UniverseCode>
          <UniverseName>UK</UniverseName>
        </UniverseType>
        ...
      </UniverseList>
      <LipperLeaderScoresList>
        <LipperLeaderScoresType>
          <LipperId>60003333</LipperId>
          <PublishedDate xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
          <DataDate>2009-02-27</DataDate>
          <LipperLeaderUniverseId>5681</LipperLeaderUniverseId>
          <ConsistentReturnOverallScore>1</ConsistentReturnOverallScore>
          <ConsistentReturnCount>10808</ConsistentReturnCount>
          <ConsistentReturn3yrScore>1</ConsistentReturn3yrScore>
          <ConsistentReturn3yrCount>10808</ConsistentReturn3yrCount>
          <ConsistentReturn5yrScore>1</ConsistentReturn5yrScore>
          <ConsistentReturn5yrCount>7514</ConsistentReturn5yrCount>
          <ConsistentReturn10yrScore xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
          <ConsistentReturn10yrCount xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
          <ExpenseOverallScore xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
          <ExpenseCount xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
          <Expense3yrScore xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
          <Expense3yrCount xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
          <Expense5yrScore xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
          <Expense5yrCount xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
          <Expense10yrScore xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
          <Expense10yrCount xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
          <PreservationOverallScore>4</PreservationOverallScore>
          <PreservationCount>11097</PreservationCount>
          <Preservation3yrScore>4</Preservation3yrScore>
          <Preservation3yrCount>11097</Preservation3yrCount>
          <Preservation5yrScore>3</Preservation5yrScore>
          <Preservation5yrCount>7817</Preservation5yrCount>
          <Preservation10yrScore xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
          <Preservation10yrCount xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
          <TaxEfficiencyCount xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
          <TaxEfficiencyOverallScore xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
          <TaxEfficiency3yrScore xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
          <TaxEfficiency3yrCount xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
          <TaxEfficiency5yrScore xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
          <TaxEfficiency5yrCount xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
          <TaxEfficiency10yrScore xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
          <TaxEfficiency10yrCount xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
          <TotalReturnOverallScore>2</TotalReturnOverallScore>
          <TotalReturnCount>10808</TotalReturnCount>
          <TotalReturn3yrScore>2</TotalReturn3yrScore>
          <TotalReturn3yrCount>10808</TotalReturn3yrCount>
          <TotalReturn5yrScore>2</TotalReturn5yrScore>
          <TotalReturn5yrCount>7514</TotalReturn5yrCount>
          <TotalReturn10yrScore xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
          <TotalReturn10yrCount xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
        </LipperLeaderScoresType>
        ...
      </LipperLeaderScoresList>
    </AssetDetailsRatingsResult>
  </GetAssetDetailsRatings_Response_1>
</Body>
</Envelope>

```

Element	Description
LipperID	The asset's Lipper ID.
UniverseList	The list of universes to which the asset belongs. Contains the following elements:



	• UniverseId - the numeric Universe ID. • Language - the Language ID that represents the display language for the universe information. • UniverseCode - the alphabetic universe code. • UniverseName - the name of the universe.
LipperLeaderScoresList	The asset's Lipper Leader scores. Lipper Leader Score is a rating (1-5, with 5 being the highest) that Lipper assigns to a fund. Lipper Leader Scores are given for a number of categories: total return, consistent return, preservation, tax efficiency, and expense. Contains the following elements: • LipperId - the Lipper ID. • PublishedDate - the date the Lipper Leader Score was published. • DataDate - the date for which data will be returned. • LipperLeaderUniverseId - the Universe ID for which the Lipper Leader score is applicable. • ConsistentReturnOverallScore - the Consistent Return overall score. • ConsistentReturnCount - the Consistent Return count. • ConsistentReturn3yrScore - the Consistent Return 3 Year score. • ConsistentReturn3yrCount - the Consistent Return 3 Year count. • ConsistentReturn5yrScore - the Consistent Return 5 Year score. • ConsistentReturn5yrCount - the Consistent Return 5 Year count. • ConsistentReturn10yrScore - the Consistent Return 10 Year score. • ConsistentReturn10yrCount - the Consistent Return 10 Year count. • ExpenseOverallScore - the Expense overall score. • ExpenseCount - the Expense count. • Expense3yrScore - the Expense 3 Year score. • Expense3yrCount - the Expense 3 Year count. • Expense5yrScore - the Expense 5 Year score. • Expense5yrCount - the Expense 5 Year count. • Expense10yrScore - the Expense 10 Year score. • Expense10yrCount - the Expense 10 Year count. • PreservationOverallScore - the Preservation overall score. • PreservationCount - the Preservation count. • Preservation3yrScore - the Preservation 3 Year score. • Preservation3yrCount - the Preservation 3 Year count. • Preservation5yrScore - the Preservation 5 Year score. • Preservation5yrCount - the Preservation 5 Year count. • Preservation10yrScore - the Preservation 10 Year score. • Preservation10yrCount - the Preservation 10 Year count. • TaxEfficiencyCount - the Tax Efficiency count. • TaxEfficiencyOverallScore - the Tax Efficiency overall score. • TaxEfficiency3yrScore - the Tax Efficiency 3 Year score. • TaxEfficiency3yrCount - the Tax Efficiency 3 Year count. • TaxEfficiency5yrScore - the Tax Efficiency 5 Year score. • TaxEfficiency5yrCount - the Tax Efficiency 5 Year count. • TaxEfficiency10yrScore - the Tax Efficiency 10 Year score. • TaxEfficiency10yrCount - the Tax Efficiency 10 Year count. • TotalReturnOverallScore - the Total Return overall score. • TotalReturnCount - the Total Return count. • TotalReturn3yrScore - the Total Return 3 Year score. • TotalReturn3yrCount - the Total Return 3 Year count. • TotalReturn5yrScore - the Total Return 5 Year score. • TotalReturn5yrCount - the Total Return 5 Year count. • TotalReturn10yrScore - the Total Return 10 Year score. • TotalReturn10yrCount - the Total Return 10 Year count.

1. **The Lipper Rating for Consistent Return** identifies a fund that has provided relatively superior consistency and risk-adjusted returns when compared to a group of similar funds.
2. **The Lipper Rating for Expense** identifies a fund that has successfully managed to keep its expenses low relative to its peers and within its load structure.
3. **Preservation** is a fund that has demonstrated a superior ability to preserve capital in a variety of markets when compared with other funds in its asset class.
4. **Tax Efficiency** identifies a fund that has been successful at deferring taxes over the measurement period relative to similar funds.
5. **Total Return** denotes a fund that has provided superior total returns (income from dividends and interest as well as capital appreciation) when compared to a group of similar funds.



chapter 26 Lipper Search

The Lipper Search web service provides methods that allow the client to look for an asset based on several types of characteristics. For example, Lipper Search gives the user the ability to search for assets with a name that 'begins with' or 'contains' certain words or phrases.

The following methods are available through Lipper Search service:

- **Get Class Scheme Search (GetClassSchemeSearch_1)** - returns the assets along with their classification list.
- **Get Class Scheme Search By RFS (GetClassSchemeSearchGetClassSchemeSearchByRFS_1)** - returns a list of classification schemes available for the given country.
- **Get Cross Reference Search - (GetCrossReferenceSearch_1)** - returns the assets that have cross-reference codes matching the given search string.
- **Get Cross Reference Search By Universe (GetCrossReferenceSearchByUniverse_1)** - returns cross-reference codes matching the search string and search style based on universe.
- **Get Fund Name Search Max Records (GetFundNameSearchMaxRecords_1)** - returns the assets that meet the given criteria.
- **Get Fund Name Search Max Records By Universe (GetFundNameSearchMaxRecordsByUniverse_1)** - returns funds name search max records by universe.
- **Get Fund Name Search Paging (GetFundNameSearchPaging_1)** - returns the assets that meet the given criteria.
- **Get Fund Name Search Pagination By RFS (GetFundNameSearchPaginationByRFS_1)** - returns funds name search pagination for the specified country.
- **Get Legal Structure Search (GetLegalStructureSearch_1)** - returns the assets that have the given legal structure.
- **Get Lipper Leader Score Search (GetLipperLeaderScoreSearch_1)** - returns Lipper Leader Scores that meet the specified criteria.
- **Get Search Keyword By Asset Type (GetSearchKeywordByAssetType_1)** - searches the type of the keyword by asset.

26.1 Authentication/Authorization, Service Endpoint, and Required Headers

Authorization

All requests to the Lipper Search service require an authorization token. For details, see section Understanding Authentication Tokens.

Authentication

Lipper Search uses Reuters impersonation tokens for each effective user. In this case, Thomson Reuters must create each user before your application authenticates them. Unmanaged effective users are not supported in Lipper Search.

For additional information on creating a Service Token, see section Creating a Token.

Service Endpoint

Lipper Search Endpoint

<http://api.rkd.reuters.com/api/LipperSearch/LipperSearch.svc>

Required Header

Required HTTP Headers

POST /api/LipperSearch/LipperSearch.svc HTTP/1.1
Content-Type: application/soap+xml
Host: api.rkd.reuters.com



Content-Length: [length]

26.2 WSDL

WSDL:
http://api.rkd.reuters.com/schemas/LipperSearch/wSDL/LipperSearch_1_HttpAndRKDToken.wsdl

26.3 Get Classes by Class Scheme (GetClassesbyClassScheme_1)

Use the GetClassesbyClassScheme_1 method to retrieve a list of classifications for the given classification scheme ID.

The example below retrieves classifications for the '6052' classification scheme ID in Italian language:

XML Sample Request - Retrieving Classes by Class Scheme
<pre><Envelope xmlns="http://www.w3.org/2003/05/soap-envelope"> <Header> <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperSearch/LipperSearch.svc</To> <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID> <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperSearch_1/ GetClassesbyClassScheme_1</Action> <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1"> <ApplicationID>[AppID]</ApplicationID> <Token>[service token]</Token> </Authorization> </Header> <Body> <GetClassesbyClassScheme_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperSearch_1"> <classSchemeID>6052</classSchemeID> <language>Italian</language> </GetClassesbyClassScheme_Request_1> </Body> </Envelope></pre>

Parameter	Description
classSchemeID	The classification scheme ID for which the classification list will be returned.
language	The display language for the search results.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

The response returns a list of <ClassType> elements that contains the list of classifications for the given classification scheme.

XML Sample Response - Retrieving Classes by Class Scheme
<pre><s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing"> <s:Header> <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperSearch_1/ GetClassesbyClassScheme_1_Reply</a:Action> <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns: xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema"> <Date>2009-04-17T10:41:48.639875Z</Date> <DoNotStore /> </CacheResponse> <a:RelatesTo>[MessageID]</a:RelatesTo> </s:Header> <s:Body></pre>

```

<GetClassesbyClassScheme_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperSearch_1">
  <ClassSearchByClassSchemeResult>
    <ClassType>
      <ClassId>14139</ClassId>
      <ClassName>Absolute Return</ClassName>
      <Language>Italian</Language>
    </ClassType>
    <ClassType>
      <ClassId>6070</ClassId>
      <ClassName>Azioni Altro</ClassName>
      <Language>Italian</Language>
    </ClassType>
    ....
    <ClassType>
      <ClassId>6181</ClassId>
      <ClassName>Speculativo/Strategie Multiple</ClassName>
      <Language>Italian</Language>
    </ClassType>
  </ClassSearchByClassSchemeResult>
</GetClassesbyClassScheme_Response_1>

</Body>
</Envelope>

```

Element	Description
ClassId	The classification type's numeric ID.
ClassName	The name of the classification type.
Language	The display language for classification data.

26.4 Get Class Scheme Search (GetClassSchemeSearch_1)

Use the GetClassSchemeSearch_1 method to retrieve assets, along with their classification list according to the classification scheme specified as a parameter in the search string.

Class is an abbreviation for 'classification'. A classification is a designation assigned to assets based on various characteristics of the assets. For example, "Equity North America" is a classification assigned to an asset. Classifications are organized into classification schemes. Lipper provides multiple classification schemes around the world. For example, Equity North America is a classification within the Lipper Global Classification scheme.

The example below retrieves class schemes which names begin with 'Ab' and are displayed in English language:

XML Sample Request - Making Class Scheme Search

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperSearch/LipperSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperSearch_1/GetClassSchemeSearch_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetClassSchemeSearch_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperSearch_1">
      <searchstring>Ab</searchstring>
      <language>English</language>
    </GetClassSchemeSearch_Request_1>
  </Body>
</Envelope>

```

Parameter	Description
searchstring	The classification scheme for which to search according to the specified search string value. Note that this field



g	does not accept any special characters.
language	The display language for the search results.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

The response returns a list of <ClassSchemeType> elements that contain the assets and their classification schemes that meet the given search criteria.

XML Sample Response - Making Class Scheme Search

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperSearch_1/
    GetClassSchemeSearch_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetClassSchemeSearch_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperSearch_1">
      <ClassSchemeSearchResult>
        <ClassSchemeType>
          <ClassSchemeId>1594</ClassSchemeId>
          <ClassSchemeCode>ABIUKLIFE</ClassSchemeCode>
          <ClassSchemeName>ABI UK Old Life Fund</ClassSchemeName>
          <Language>English</Language>
          <LipperId>0</LipperId>
        </ClassSchemeType>
        <ClassSchemeType>
          <ClassSchemeId>1735</ClassSchemeId>
          <ClassSchemeCode>ABIUKPENSION</ClassSchemeCode>
          <ClassSchemeName>ABI UK Old Pension Fund</ClassSchemeName>
          <Language>English</Language>
          <LipperId>0</LipperId>
        </ClassSchemeType>
        <ClassSchemeType>
          <ClassSchemeId>29029</ClassSchemeId>
          <ClassSchemeCode>ABILIFE2008</ClassSchemeCode>
          <ClassSchemeName>ABI Life Scheme</ClassSchemeName>
          <Language>English</Language>
          <LipperId>0</LipperId>
        </ClassSchemeType>
        <ClassSchemeType>
          <ClassSchemeId>29030</ClassSchemeId>
          <ClassSchemeCode>ABIIPEN2008</ClassSchemeCode>
          <ClassSchemeName>ABI Pension Scheme</ClassSchemeName>
          <Language>English</Language>
          <LipperId>0</LipperId>
        </ClassSchemeType>
      </ClassSchemeSearchResult>
    </GetClassSchemeSearch_Response_1>
  </s:Body>
</Envelope>
```

Element	Description
ClassSchemeId	The classification scheme's numeric ID.
ClassSchemeCode	The classification scheme's numeric code.
ClassSchemeName	The name of the classification scheme.
Language	The display language for classification data.
LipperId	The asset's Lipper ID.



26.5 Get Class Scheme Search By RFS (GetClassSchemeSearchByRFS_1)

Use the GetClassSchemeSearch_1 method to retrieve a list of classification schemes that are available for the specified country.

A classification is a designation assigned to assets based on various characteristics of the assets. For example, "Equity North America" is a classification assigned to an asset. Classifications are organized into classification schemes. Lipper provides multiple classification schemes around the world. For example, Equity North America is a classification within the Lipper Global Classification scheme.

The example below retrieves class schemes which names begin with 'Ab' and are displayed in English language:

XML Sample Request - Making Class Scheme Search By RFS

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperSearch/LipperSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperSearch_1/GetClassSchemeSearchByRFS_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetClassSchemeSearchByRFS_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperSearch_1">
      <countryCode>USA</countryCode>
      <language>English</language>
      <provideClasses>true</provideClasses>
    </GetClassSchemeSearchByRFS_Request_1>
  </Body>
</Envelope>
```

Parameter	Description
countryCode	The country for which classification schemes will be returned. For full listing of available counties, see section Countries Enumeration in the Lipper Data Enumerations chapter.
language	The display language for the search results.
provideClasses	If set to 'true' then the classifications for each classification scheme will be included in the results; if set to 'false' then no classification types will be included in the results.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

The response returns a list of <ClassSchemeType> elements that contain the classification schemes that are registered for sale in the country specified in the <countryCode> parameter.

XML Sample Response - Making Class Scheme Search By RFS

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperSearch_1/GetClassSchemeSearchByRFS_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
```




```

<GetClassSchemeSearchByRFS_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperSearch_1">
  <ClassSchemeSearchByRFSResult>
    <ClassSchemeType>
      <ClassSchemeId>2067</ClassSchemeId>
      <ClassSchemeCode>FRANCE</ClassSchemeCode>
      <ClassSchemeName>AMF</ClassSchemeName>
      <Language>English</Language>
      <ClassList>
        <ClassType>
          <ClassId>4383</ClassId>
          <ClassName>Actions Communauté Européenne</ClassName>
          <Language>English</Language>
        </ClassType>
        <ClassType>
          <ClassId>2071</ClassId>
          <ClassName>Actions France</ClassName>
          <Language>English</Language>
        </ClassType>
        <ClassType>
          <ClassId>2073</ClassId>
          <ClassName>Actions Internationales</ClassName>
          <Language>English</Language>
        </ClassType>
        ...
      </ClassList>
      <LipperId>0</LipperId>
    </ClassSchemeType>
    ...
  </ClassSchemeSearchByRFSResult>
</GetClassSchemeSearchByRFS_Response_1>

</Body>
</Envelope>

```

Element	Description
ClassSchemeId	The classification scheme's numeric ID.
ClassSchemeCode	The classification scheme's numeric code.
ClassSchemeName	The name of the classification scheme.
Language	The display language for classification data.
ClassList	The asset's classification list for the classification scheme set in <ClassSchemeName>. A ClassificationList is the set of classifications that belong to a classification scheme. Contains the following elements: • ClassId - the classification type's numeric ID. • ClassName - the name of the classification type. • Language - the display language for classification data.
LipperId	The asset's Lipper ID.

26.6 Get Cross Reference Search (GetCrossReferenceSearch_1)

The GetCrossReferenceSearch_1 method can be used to retrieve assets that have cross-reference codes that match the given search string.

A cross-reference code is a unique identifier that represents an asset. For example, "ticker symbol" or CUSIP, or ISIN are cross-reference codes.

The example below retrieves assets with their cross-reference codes and which names begin with 'Ab':

XML Sample Request - Making Cross Reference Search

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperSearch/LipperSearch.svc</To>

```



```

<MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
<Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperSearch_1/
GetCrossReferenceSearch_1</Action>
<Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
  <ApplicationID>[AppID]</ApplicationID>
  <Token>[service token]</Token>
</Authorization>
</Header>
<Body>
  <GetCrossReferenceSearch_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperSearch_1">
    <searchString>Ab</searchString>
    <crossReferenceSearchStyle>BeginsWith</crossReferenceSearchStyle>
  </GetCrossReferenceSearch_Request_1>
</Body>
</Envelope>

```

Parameter	Description
searchstring	The cross-reference code (or a set of codes) that correspond to the specified search string value.
crossReferenceSearchStyle	The search style, either Begins With or Exact. 'BeginsWith' will search for assets based on the specified name, while 'Exact' is used with Symbol search and requires an exact identifier such as CUSIP.

The response returns a list of <SearchResultType> elements that contain the assets that meet the search criteria.

XML Sample Response - Making Cross Reference Search

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperSearch_1/
    GetCrossReferenceSearch_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetCrossReferenceSearch_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperSearch_1">
      <CrossReferenceSearchResult>
        <SearchResultType>
          <LipperId>11031841</LipperId>
          <Language>English</Language>
          <AssetName>Brazil Policy Rates CDI (% p.y., basic 252)</AssetName>
          <AssetCategory>Indices</AssetCategory>
          <Code>aBRCDIY</Code>
          <CodeName>RIC / Triarch Code</CodeName>
        </SearchResultType>
        <SearchResultType>
          <LipperId>11031842</LipperId>
          <Language>English</Language>
          <AssetName>Brazil Selic Rate</AssetName>
          <AssetCategory>Indices</AssetCategory>
          <Code>aBRSELIC</Code>
          <CodeName>RIC / Triarch Code</CodeName>
        </SearchResultType>
        ...
        <SearchResultType>
          <LipperId>77009707</LipperId>
          <Language>English</Language>
          <AssetName>NU Overseas Equity BRASS PM 02-Pen</AssetName>
          <Domicile>UK</Domicile>
          <AssetCategory>Pension Funds</AssetCategory>
          <Promoter>Norwich Union</Promoter>
          <Administrator>Norwich Union Life Services Limited</Administrator>
          <Code>ABI0274</Code>
          <CodeName>Administrator Code</CodeName>
        </SearchResultType>
      </CrossReferenceSearchResult>
    </GetCrossReferenceSearch_Response_1>
  </s:Body>
</s:Envelope>

```



```

</SearchResultType>
</CrossReferenceSearchResult>
</GetCrossReferenceSearch_Response_1>

</Body>
</Envelope>

```

Element	Description
LipperId	The asset's Lipper ID.
Language	The display language for the asset identity information.
AssetName	The name of the asset.
Domicile	The asset's domicile.
AssetCategory	The asset's category. Asset Category identifies the universe that the asset belongs to, such as, mutual fund, indices, exchange traded fund, etc.
Promoter	The asset's promoter's name. A promoter is the company responsible for promoting the fund.
Administrator	The asset's administrator's name. The administrator provides back office support and compliance services to the fund.
Code	The alphabetic code of the asset.
CodeName	The name of the code.

26.7 Get Cross Reference Search By Universe (GetCrossReferenceSearchByUniverse_1)

The GetCrossReferenceSearchByUniverse_1 method can be used to retrieve cross-reference codes matching the search string and search style based on universe.

A cross-reference code is a unique identifier that represents an asset. For example, "ticker symbol" or CUSIP, or ISIN are cross-reference codes.

The example below retrieves assets with their cross-reference codes and which names begin with 'Ab' for the USA universe:

XML Sample Request - Making Cross Reference Search By Universe

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperSearch/LipperSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperSearch_1/GetCrossReferenceSearchByUniverse_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetCrossReferenceSearchByUniverse_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperSearch_1">
      <searchStr>Ab</searchStr>
      <universeCode>USA</universeCode>
      <crossreferencesearchStyle>BeginsWith</crossreferencesearchStyle>
    </GetCrossReferenceSearchByUniverse_Request_1>
  </Body>
</Envelope>

```

Parameter	Description
searchStr	The search string.
universeCode	The code of the Universe. For full listing of universe codes, see section Universe Enumeration in the Lipper Data Enumerations chapter.
crossrefer	Specifies how the search should be performed. The possible value could be 'BeginsWith' and 'Exact'. 'BeginsWith'



encesearchStyle	will search for assets based on the specified name, while 'Exact' is used with Symbol search and requires an exact identifier such as CUSIP.

The response returns a list of <LipperLeaderSearchResultType> matching the specified criteria using the specified search style.

XML Sample Response - Making Cross Reference Search By Universe

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperSearch_1/
    GetCrossReferenceSearchByUniverse_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetCrossReferenceSearchByUniverse_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperSearch_1">
      <CrossReferenceSearchByUniverseResult>
        <LipperLeaderSearchResultType>
          <LipperId>40001457</LipperId>
          <Language>English</Language>
          <AssetName>Munder Bond Fund;K</AssetName>
          <Domicile>USA</Domicile>
          <AssetCategory>Mutual Funds</AssetCategory>
          <Promoter>MUNDER CAPITAL MANAGEMENT</Promoter>
          <Administrator>MUNDER CAPITAL MANAGEMENT</Administrator>
          <Code>ABDIX.O^F95</Code>
          <CodeName>RIC</CodeName>
          <AssetTypeName>Bond</AssetTypeName>
          <DataDate>2009-03-31</DataDate>
          <RecordCount>324</RecordCount>
        </LipperLeaderSearchResultType>
        <LipperLeaderSearchResultType>
          <LipperId>40001460</LipperId>
          <Language>English</Language>
          <AssetName>Munder Bond Fund;A</AssetName>
          <Domicile>USA</Domicile>
          <AssetCategory>Mutual Funds</AssetCategory>
          <Promoter>MUNDER CAPITAL MANAGEMENT</Promoter>
          <Administrator>MUNDER CAPITAL MANAGEMENT</Administrator>
          <Code>ABRAX.O^F95</Code>
          <CodeName>RIC</CodeName>
          <AssetTypeName>Bond</AssetTypeName>
          <DataDate>2009-03-31</DataDate>
          <RecordCount>324</RecordCount>
        </LipperLeaderSearchResultType>
        ...
        <LipperLeaderSearchResultType>
          <LipperId>40094506</LipperId>
          <Language>English</Language>
          <AssetName>RiverSource Portfolio Builder Conservative Fund;B</AssetName>
          <Domicile>USA</Domicile>
          <AssetCategory>Mutual Funds</AssetCategory>
          <Promoter>RIVERSOURCE INVESTMENTS LLC</Promoter>
          <Administrator>AMERIPRISE FINANCIAL INC</Administrator>
          <Code>ABBDX</Code>
          <CodeName>NASDAQ Ticker</CodeName>
          <AssetTypeName>Mixed Assets</AssetTypeName>
          <DataDate>2009-03-31</DataDate>
          <RecordCount>324</RecordCount>
        </LipperLeaderSearchResultType>
      </CrossReferenceSearchByUniverseResult>
    </GetCrossReferenceSearchByUniverse_Response_1>
  </s:Body>
</Envelope>
```

Element	Description



LipperId	The asset's Lipper ID.
Language	The display language for the asset identity information.
AssetName	The name of the asset.
Domicile	The asset's domicile.
AssetCategory	The asset's category. An asset category identifies the universe that the asset belongs to, such as, mutual fund, indices, exchange traded fund, etc.
Promoter	The asset's promoter's name. A promoter is the company responsible for promoting the fund.
Administrator	The asset's administrator's name. The administrator provides back office support and compliance services to the fund.
Code	The alphabetic code of the asset.
CodeName	The name of the code.
AssetTypeName	The name of the asset type.
DataDate	The data date.
RecordCount	The number of found records.

26.8 Get Fund Name Search Max Records (GetFundNameSearchMaxRecords_1)

You can use the GetFundNameSearchMaxRecords_1 method to perform a search by fund name and retrieve the assets that meet the given criteria. The number of assets returned is controlled by maximum records setting.

The example below searches for assets, the names of which begin with 'Ab' and returns maximum 100 records:

XML Sample Request - Retrieving Fund Name Search Max Records

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperSearch/LipperSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperSearch_1/GetFundNameSearchMaxRecords_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetFundNameSearchMaxRecords_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperSearch_1">
      <searchString>Ab</searchString>
      <searchStyle>BeginsWith</searchStyle>
      <maxRecords>100</maxRecords>
    </GetFundNameSearchMaxRecords_Request_1>
  </Body>
</Envelope>
```

Parameter	Description
searchString	The search string.
searchStyle	The search style, either Begins With or Contains. Both values search assets based on the specified name. 'BeginsWith' searches only for assets which names begin with the specified values, while 'Contains' - which names contain the specified value in any position.
maxRecords	The maximum number of assets to be returned at one time.

The response returns a list of <AssetIdentityType> elements that contain the assets that meet the given search criteria.



XML Sample Response - Retrieving Fund Name Search Max Records

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperSearch_1/
    GetFundNameSearchMaxRecords_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetFundNameSearchMaxRecords_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperSearch_1">
      <FundNameSearchMaxRecordsResult>
        <AssetIdentityType>
          <LipperId>11028279</LipperId>
          <Language>English</Language>
          <Name>ABG Nordic TMT CR</Name>
        </AssetIdentityType>
        <AssetIdentityType>
          <LipperId>19074014</LipperId>
          <Language>English</Language>
          <Name>ABI UK - Asia Pacific ex Japan Equities-Life</Name>
        </AssetIdentityType>
        <AssetIdentityType>
          <LipperId>19074013</LipperId>
          <Language>English</Language>
          <Name>ABI UK - Asia Pacific inc Japan Equities-Life</Name>
        </AssetIdentityType>
        ...
        <AssetIdentityType>
          <LipperId>11029236</LipperId>
          <Language>English</Language>
          <Name>Abu Dhabi Securities Market CR</Name>
        </AssetIdentityType>
      </FundNameSearchMaxRecordsResult>
    </GetFundNameSearchMaxRecords_Response_1>
  </s:Body>
</Envelope>

```

Element	Description
LipperId	The asset's Lipper ID.
Language	The display language for asset identity information.
Name	The full name of the asset.

26.9 Get Fund Name Search Max Records By Universe (GetFundNameSearchMaxRecordsByUniverse_1)

You can use the GetFundNameSearchMaxRecordsByUniverse_1 method to perform a search by fund name and retrieve the assets that meet the given criteria by universe. The number of assets returned is controlled by maximum records setting.

The example below searches for assets, the names of which begin with 'Ab' and returns maximum 100 records:

XML Sample Request - Retrieving Fund Name Search Max Records By Universe

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperSearch/LipperSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperSearch_1/
    GetFundNameSearchMaxRecordsByUniverse_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
    </Authorization>
  </Header>
  <Body>
    ...
  </Body>
</Envelope>

```



```

    <Token>[service token]</Token>
  </Authorization>
</Header>
<Body>
  <GetFundNameSearchMaxRecordsByUniverse_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperSearch_1">
    <searchString>Ab</searchString>
    <universeCode>USA</universeCode>
    <searchStyle>BeginsWith</searchStyle>
    <maxRecords>100</maxRecords>
  </GetFundNameSearchMaxRecordsByUniverse_Request_1>
</Body>
</Envelope>

```

Parameter	Description
searchString	The search string.
universeCode	The universe code. For full listing of universe codes, see section Universe Enumeration in the Lipper Data Enumerations chapter.
searchStyle	The search style, either Begins With or Contains. Both values search assets based on the specified name. 'BeginsWith' searches only for assets which names begin with the specified values, while 'Contains' - which names contain the specified value in any position.
maxRecords	The maximum number of assets to be returned at one time.

The response returns a list of <AssetIdentityType> elements that contain the assets that meet the given search criteria.

XML Sample Response - Retrieving Fund Name Search Max Records By Universe

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperSearch_1/GetFundNameSearchMaxRecordsByUniverse_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetFundNameSearchMaxRecordsByUniverse_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperSearch_1">
      <FundNameSearchMaxRecordsByUniverseResult>
        <AssetIdentityType>
          <LipperId>40095941</LipperId>
          <Language>English</Language>
          <Name>Aberdeen China Opportunities Fund;A</Name>
        </AssetIdentityType>
        <AssetIdentityType>
          <LipperId>40095942</LipperId>
          <Language>English</Language>
          <Name>Aberdeen China Opportunities Fund;B</Name>
        </AssetIdentityType>
        <AssetIdentityType>
          <LipperId>40095943</LipperId>
          <Language>English</Language>
          <Name>Aberdeen China Opportunities Fund;C</Name>
        </AssetIdentityType>
        <AssetIdentityType>
          <LipperId>40095946</LipperId>
          <Language>English</Language>
          <Name>Aberdeen China Opportunities Fund;Inst Service</Name>
        </AssetIdentityType>
        <AssetIdentityType>
          <LipperId>40095945</LipperId>
          <Language>English</Language>

```



```

    <Name>Aberdeen China Opportunities Fund;Institutional</Name>
  </AssetIdentityType>
  ...
  <AssetIdentityType>
    <LipperId>40039305</LipperId>
    <Language>English</Language>
    <Name>ABN AMRO/Chicago Trust Sm Cap Val Fund (Class N)</Name>
  </AssetIdentityType>
  </FundNameSearchMaxRecordsByUniverseResult>
</GetFundNameSearchMaxRecordsByUniverse_Response_1>

</Body>
</Envelope>

```

Element	Description
LipperId	The asset's Lipper ID.
Language	The display language for asset identity information.
Name	The full name of the asset.

26.10 Get Fund Name Search Paging (GetFundNameSearchPaging_1)

By using the GetFundNameSearchPaging_1 method you can perform a search by fund name and returns the assets that meet the given criteria. The number of assets returned is controlled by paging, for example, setting 'paginationStart' to 1 'paginationEnd' to 5 will return results one through five pages only.

The example below searches for attributes of Asset Type, the names of which begin with 'Ab' and shows pages from 1 to 3:

XML Sample Request - Getting Fund Name Search Paging

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperSearch/LipperSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperSearch_1/GetFundNameSearchPaging_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetFundNameSearchPaging_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperSearch_1">
      <searchString>Ab</searchString>
      <searchStyle>BeginsWith</searchStyle>
      <paginationStart>1</paginationStart>
      <paginationEnd>3</paginationEnd>
    </GetFundNameSearchPaging_Request_1>
  </Body>
</Envelope>

```

Parameter	Description
searchString	The search string.
searchStyle	The search style, either Begins With or Contains. Both values search assets based on the specified name. 'BeginsWith' searches only for assets which names begin with the specified values, while 'Contains' - which names contain the specified value in any position.
paginationStart	The pagination start number.
paginationEnd	The pagination end number.

Note: 'PaginationStart' and 'PaginationEnd' give a user the ability to control the returned results from the search query. For



example, setting 'paginationStart' to 1 and 'paginationEnd' to 5 will return results one through five page only.

The response returns a list of <AssetIdentityType> elements that contain the assets that meet the search criteria.

XML Sample Response - Getting Fund Name Search Paging

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperSearch_1/
    GetFundNameSearchPaging_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetFundNameSearchPaging_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperSearch_1">
      <FundNameSearchPagingResult>
        <AssetIdentityType>
          <LipperId>11028279</LipperId>
          <Language>English</Language>
          <Name>ABG Nordic TMT CR</Name>
        </AssetIdentityType>
        <AssetIdentityType>
          <LipperId>11029236</LipperId>
          <Language>English</Language>
          <Name>Abu Dhabi Securities Market CR</Name>
        </AssetIdentityType>
        <AssetIdentityType>
          <LipperId>11033050</LipperId>
          <Language>English</Language>
          <Name>ABN AMRO LLB MENA Top 20 Value CR</Name>
        </AssetIdentityType>
      </FundNameSearchPagingResult>
    </GetFundNameSearchPaging_Response_1>
  </s:Body>
</Envelope>
```

Element	Description
LipperId	The asset's Lipper ID.
Language	The display language for asset identity information. Asset identity is the information used to characterize the fund such as LipperID or fund name.
Name	The full name of the asset.

26.11 Get Fund Name Search Pagination By RFS (GetFundNameSearchPaginationByRFS_1)

By using the GetFundNameSearchPaginationByRFS_1 method you can search for funds that belong to the specified country. The number of funds returned is controlled by paging, for example, setting 'paginationStart' to 1 'paginationEnd' to 5 will return results one through five pages only.

Pagination are controls that allow the user to control the results from requests passed into the services. For example, if a client is using Lipper Web Services to build a web-site, they can use pagination to control how many search results display on the screen.

The example below searches for attributes of Asset Type, the names of which begin with 'Int' and shows pages from 10 to 20 for the USA:

XML Sample Request - Making Fund Name Search Pagination By RFS

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
```



```

<Header>
  <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperSearch/LipperSearch.svc</To>
  <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
  <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperSearch_1/
  GetFundNameSearchPaginationByRFS_1</Action>
  <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
    <ApplicationID>[AppID]</ApplicationID>
    <Token>[service token]</Token>
  </Authorization>
</Header>
<Body>
  <GetFundNameSearchPaginationByRFS_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperSearch_1">
    <searchString>Int</searchString>
    <searchStyle>BeginsWith</searchStyle>
    <paginationStart>10</paginationStart>
    <paginationEnd>20</paginationEnd>
    <countries>
      <Countries>USA</Countries>
    </countries>
  </GetFundNameSearchPaginationByRFS_Request_1>
</Body>
</Envelope>

```

Parameter	Description
searchString	The search string.
searchStyle	The search style, either Begins With or Contains. Both values search assets based on the specified name. 'BeginsWith' searches only for assets which names begin with the specified values, while 'Contains' - which names contain the specified value in any position.
paginationStart	The pagination start number.
paginationEnd	The pagination end number.
countries	The country (list of countries) for which assets will be returned. For full listing of available counties, see section Countries Enumeration in the Lipper Data Enumerations chapter.

Note: 'PaginationStart' and 'PaginationEnd' give a user the ability to control the returned results from the search query. For example, setting 'paginationStart' to 1 and 'paginationEnd' to 5 will return results one through five page only.

The response returns a list of <SearchResultType> elements that contain the assets that meet the search criteria.

XML Sample Response - Making Fund Name Search Pagination By RFS

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperSearch_1/
    GetFundNameSearchPaginationByRFS_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetFundNameSearchPaginationByRFS_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperSearch_1">
      <FundNameSearchPaginationByRFSResult>
        <SearchResultType>
          <LipperId>40003911</LipperId>
          <Language>English</Language>
          <AssetName>Integrity Income Fund (Class N)</AssetName>
          <Domicile>USA</Domicile>
          <AssetCategory>Mutual Funds</AssetCategory>
          <Promoter>INTEGRITY MONEY MANAGEMENT INC</Promoter>
          <Administrator>INTEGRITY FUND SERVICES INC</Administrator>
        </SearchResultType>
      </FundNameSearchPaginationByRFSResult>
    </GetFundNameSearchPaginationByRFS_Response_1>
  </s:Body>
</s:Envelope>

```



```

</SearchResultType>
<SearchResultType>
  <LipperId>40003912</LipperId>
  <Language>English</Language>
  <AssetName>Integrity Equity Fund;N</AssetName>
  <Domicile>USA</Domicile>
  <AssetCategory>Mutual Funds</AssetCategory>
  <Promoter>INTEGRITY MONEY MANAGEMENT INC</Promoter>
  <Administrator>INTEGRITY FUND SERVICES INC</Administrator>
</SearchResultType>
<SearchResultType>
  <LipperId>40005204</LipperId>
  <Language>English</Language>
  <AssetName>Integrity ND Tax-Free Fund;B</AssetName>
  <Domicile>USA</Domicile>
  <AssetCategory>Mutual Funds</AssetCategory>
  <Promoter>INTEGRITY MONEY MANAGEMENT INC</Promoter>
</SearchResultType>
...
<SearchResultType>
  <LipperId>40009462</LipperId>
  <Language>English</Language>
  <AssetName>Integ "I"Gmst:VIP MM;I</AssetName>
  <Domicile>USA</Domicile>
  <AssetCategory>Insurance Funds</AssetCategory>
  <Promoter>INTEGRITY LIFE INSURANCE CO</Promoter>
</SearchResultType>
</FundNameSearchPaginationByRFSResult>
</GetFundNameSearchPaginationByRFS_Response_1>
</Body>
</Envelope>

```

Element	Description
LipperId	The asset's Lipper ID.
Language	The display language for the asset identity information.
AssetName	The name of the asset.
Domicile	The asset's domicile.
AssetCategory	The asset's category. An asset category identifies the universe that the asset belongs to, such as, mutual fund, indices, exchange traded fund, etc.
Promoter	The asset's promoter's name. A promoter is the company responsible for promoting the fund.
Administrator	The asset's administrator's name. The administrator provides back office support and compliance services to the fund.
Code	The alphabetic code of the asset.
CodeName	The name of the code.

26.12 Get Legal Structure Search (GetLegalStructureSearch_1)

The GetLegalStructureSearch_1 method can be used to retrieve the assets that have the specified legal structure.

Legal structure is treated like an attribute of the asset and represents the way the asset has been formed for operation.

The example below retrieves assets which contain 'Inv' in their names and are displayed in English language:

XML Sample Request - Making Legal Structure Search

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperSearch/LipperSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperSearch_1/GetLegalStructureSearch_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>

```



```

    </Authorization>
  </Header>
  <Body>
    <GetLegalStructureSearch_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperSearch_1">
      <searchString>Inv</searchString>
      <language>English</language>
    </GetLegalStructureSearch_Request_1>
  </Body>
</Envelope>

```

Parameter	Description
searchString	The legal structure according to the specified search string value for which assets will be returned. Note that this field does not accept any special characters.
language	The display language for the search results.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

The response returns a list of <LegalStructureType> elements that contain the assets that meet the given search criteria.

XML Sample Response - Making Legal Structure Search

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperSearch_1/GetLegalStructureSearch_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetLegalStructureSearch_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperSearch_1">
      <LegalStructureSearchResult>
        <LegalStructureType>
          <LipperId>60095668</LipperId>
          <Language>English</Language>
          <LegalStructureId>1129</LegalStructureId>
          <LegalStructureCode>INVFONDS</LegalStructureCode>
          <LegalStructureName>DE - Investmentfonds</LegalStructureName>
        </LegalStructureType>
        <LegalStructureType>
          <LipperId>60036311</LipperId>
          <Language>English</Language>
          <LegalStructureId>1129</LegalStructureId>
          <LegalStructureCode>INVFONDS</LegalStructureCode>
          <LegalStructureName>DE - Investmentfonds</LegalStructureName>
        </LegalStructureType>
        <LegalStructureType>
          <LipperId>60055269</LipperId>
          <Language>English</Language>
          <LegalStructureId>1129</LegalStructureId>
          <LegalStructureCode>INVFONDS</LegalStructureCode>
          <LegalStructureName>DE - Investmentfonds</LegalStructureName>
        </LegalStructureType>
        <LegalStructureType>
          <LipperId>60074804</LipperId>
          <Language>English</Language>
          <LegalStructureId>1129</LegalStructureId>
          <LegalStructureCode>INVFONDS</LegalStructureCode>
          <LegalStructureName>DE - Investmentfonds</LegalStructureName>
        </LegalStructureType>
        ...
        <LegalStructureType>
          <LipperId>65139728</LipperId>
          <Language>English</Language>

```



```

    <LegalStructureId>1129</LegalStructureId>
    <LegalStructureCode>INVFONDS</LegalStructureCode>
    <LegalStructureName>DE - Investmentfonds</LegalStructureName>
  </LegalStructureType>
</LegalStructureSearchResult>
</GetLegalStructureSearch_Response_1>
</Body>
</Envelope>

```

Element	Description
LipperId	The asset's Lipper ID.
Language	The Language ID that represents the data language for the legal structure information.
LegalStructureId	The legal structure numeric ID.
LegalStructureCode	The legal structure alphabetic code.
LegalStructureName	The name of the legal structure.

26.13 Get Lipper Leader Score Search (GetLipperLeaderScoreSearch_1)

The GetLipperLeaderScoreSearch_1 method can be used to retrieve Lipper Leader Scores that meet the specified criteria.

Lipper Leader Score is a rating (1-5, with 5 being high) that Lipper assigns to a fund. Lipper Leader Scores are given for a number of categories: total return, consistent return, preservation, tax efficiency, and expense.

The example below retrieves Lipper Leader Scores for the assets with the specified LipperIDs for International Offshore Universe, displayed in English language and sorted by default in ascending order and shows pages from 1 to 20:

XML Sample Request - Making Lipper Leader Score Search

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperSearch/LipperSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperSearch_1/GetLipperLeaderScoreSearch_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetLipperLeaderScoreSearch_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperSearch_1">
      <lipperIds>
        <int>60087648</int>
        <int>65145151</int>
        <int>60003332</int>
        <int>60003331</int>
        <int>60003333</int>
      </lipperIds>
      <language>English</language>
      <universeId>INTL</universeId>
      <sortBy>Default</sortBy>
      <sortingOrder>Ascending</sortingOrder>
      <paginationStart>1</paginationStart>
      <paginationEnd>20</paginationEnd>
    </GetLipperLeaderScoreSearch_Request_1>
  </Body>
</Envelope>

```



Parameter	Description
lipperIds	The Lipper IDs of the assets to be included in the response.
language	The display language for the search results.
universeId	The ID of the Universe. For full listing of universes, see section Universe Enumeration in the Lipper Data Enumerations chapter.
sortBy	The value by which the results must be sorted. Possible values are: • Asset Type • Class Name • Consistent Return Rating • Default • Expense Rating • Fund Company • Name • Preservation Rating • Return Value • Tax Efficiency Rating • Total Return Rating
sortingOrder	The order by which results must be sorted - Ascending or Descending.
paginationStart	The pagination start number.
paginationEnd	The pagination end number.

Note: 'PaginationStart' and 'PaginationEnd' give a user the ability to control the returned results from the search query. For example, setting 'paginationStart' to 1 and 'paginationEnd' to 5 will return results one through five page only.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

The response returns a list of <LipperLeaderClassItems> that contain the assets that meet the given search criteria.

XML Sample Response - Making Lipper Leader Score Search

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperSearch_1/
    GetLipperLeaderScoreSearch_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetLipperLeaderScoreSearch_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperSearch_1">
      <LipperLeaderScoreSearchResult>
        <LipperLeaderClassItem>
          <LipperLeaderClassListType>
            <LipperId>60003332</LipperId>
            <Language>English</Language>
            <Name>Janus Global Life Sciences A USD Acc</Name>
            <DataDate>2009-04-30</DataDate>
            <ClassName>Equity Sector Pharma&Health</ClassName>
            <AssetTypeName>Equity</AssetTypeName>
            <FundCompany>Janus Capital Funds Plc</FundCompany>
            <FundCompanyPromoterId>1277696</FundCompanyPromoterId>
            <FundCompanyPromoterName>Janus</FundCompanyPromoterName>
            <Period>Overall</Period>
            <TotalReturnRating>2</TotalReturnRating>
            <ConsistentReturnRating>2</ConsistentReturnRating>
            <PreservationRating>5</PreservationRating>
            <TaxEfficiencyRating xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
          </LipperLeaderClassListType>
        </LipperLeaderClassItem>
      </LipperLeaderScoreSearchResult>
    </GetLipperLeaderScoreSearch_Response_1>
  </s:Body>
</s:Envelope>
```



```

    <ExpenseRating xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
    <ReturnValue>-6.242040</ReturnValue>
    <RecordCount>3</RecordCount>
  </LipperLeaderClassListType>
  ...
  <LipperLeaderClassListType>
    <LipperId>60003331</LipperId>
    <Language>English</Language>
    <Name>Janus US Flexible Income B USD Acc</Name>
    <DataDate>2009-04-30</DataDate>
    <ClassName>Bond USD</ClassName>
    <AssetTypeName>Bond</AssetTypeName>
    <FundCompany>Janus Capital Funds Plc</FundCompany>
    <FundCompanyPromoterId>1277696</FundCompanyPromoterId>
    <FundCompanyPromoterName>Janus</FundCompanyPromoterName>
    <Period>Overall</Period>
    <TotalReturnRating>2</TotalReturnRating>
    <ConsistentReturnRating>3</ConsistentReturnRating>
    <PreservationRating>5</PreservationRating>
    <TaxEfficiencyRating xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
    <ExpenseRating xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
    <ReturnValue>1.617650</ReturnValue>
    <RecordCount>3</RecordCount>
  </LipperLeaderClassListType>
</LipperLeaderClassItem>
<UniverseCode>INTL</UniverseCode>
</LipperLeaderScoreSearchResult>
</GetLipperLeaderScoreSearch_Response_1>

</Body>
</Envelope>

```

Element	Description
LipperId	The asset's Lipper ID.
Language	The language that represents the display language for the Lipper Leader Score information.
Name	The full name of the asset.
DataDate	The date for which the information is valid.
Classname	The name of the classification type.
AssetTypeNa me	The name of the asset type.
FundCompan y	The full name of the fund company.
FundCompan yPromoterId	The name (ID) of the fund company promoter. A promoter is an insurance company or its subsidiary that underwrites and guarantees the death benefits and other aspects of Variable Insurance Product contracts.
FundCompan yPromoterNa me	The name of the fund company promoter.
Period	The period for which the data is shown.
TotalReturnR ating	The Total Return Rating denotes a fund that has provided superior total returns (income from dividends and interest as well as capital appreciation) when compared to a group of similar funds.
ConsistentRe turnRating	The Consistent Return Rating identifies a fund that has provided relatively superior consistency and risk-adjusted returns when compared to a group of similar funds.
Preservation Rating	The Preservation Rating identifies a fund that has demonstrates a superior ability to preserve capital in a variety of markets when compared with other funds in its asset class.
TaxEfficiency Rating	The Tax Efficiency Rating identifies a fund that has been successful at deferring taxes over the measurement period relative to similar funds.
ExpenseRatin g	The Expense Rating identifies a fund that has successfully managed to keep its expenses low relative to its peers and within its load structure.
ReturnValue	The overall return value.
RecordCount	The overall return.
UniverseCod e	The code of the Universe.



26.14 Get Search Keyword By Asset Type (GetSearchKeywordByAssetType_1)

Use the GetSearchKeywordByAssetType_1 method to search for assets and asset types by the specified keyword. The number of assets returned is controlled by maximum records setting.

The example below searches for asset, the names of which begin with 'ABI' in 'Mixed Assets' and returns maximum 100 records:

XML Sample Request - Performing Search Keyword By Asset Type

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperSearch/LipperSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperSearch_1/GetSearchKeywordByAssetType_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetSearchKeywordByAssetType_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperSearch_1">
      <keyword>ABI</keyword>
      <searchStyle>BeginsWith</searchStyle>
      <assetTypeName>MixedAssets</assetTypeName>
      <maxRecords>100</maxRecords>
    </GetSearchKeywordByAssetType_Request_1>
  </Body>
</Envelope>
```

Parameter	Description
keyword	The keyword by which the search must be performed.
searchStyle	The search style, either Begins With or Contains. Both values search assets based on the specified name. 'BeginsWith' searches only for assets which names begin with the specified values, while 'Contains' - which names contain the specified value in any position.
assetTypeName	The name of the asset type. Available asset type names are: • Bond - Bond • Equity - Equity • MixedAssets - Mixed Assets • MoneyMarket - Money Market • RealEstate - Real Estate • Other - Other • Unassigned - Unassigned • Unknown - Unknown
maxRecords	The maximum number of assets to be returned at one time.

The response returns a list of <AssetIdentityType> elements that contain the assets that meet the given search criteria.

XML Sample Response - Performing Search Keyword By Asset Type

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperSearch_1/GetSearchKeywordByAssetType_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
  </s:Header>
  <s:Body>
    <AssetIdentityType>
      <AssetName>ABI</AssetName>
      <AssetType>MixedAssets</AssetType>
    </AssetIdentityType>
  </s:Body>
</s:Envelope>
```




```

</CacheResponse>
<a:RelatesTo>[MessageID]</a:RelatesTo>
</s:Header>
<s:Body>
  <GetSearchKeywordByAssetType_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperSearch_1">
    <SearchKeywordByAssetTypeResult>
      <AssetIdentityType>
        <LipperId>19005018</LipperId>
        <Language>English</Language>
        <Name>ABI UK Old - Balanced Managed-Life</Name>
      </AssetIdentityType>
      <AssetIdentityType>
        <LipperId>19008018</LipperId>
        <Language>English</Language>
        <Name>ABI UK Old - Balanced Managed-Pen</Name>
      </AssetIdentityType>
      <AssetIdentityType>
        <LipperId>19005027</LipperId>
        <Language>English</Language>
        <Name>ABI UK Old - Cautious Managed-Life</Name>
      </AssetIdentityType>
      <AssetIdentityType>
        <LipperId>19008027</LipperId>
        <Language>English</Language>
        <Name>ABI UK Old - Cautious Managed-Pen</Name>
      </AssetIdentityType>
      ...
      <AssetIdentityType>
        <LipperId>60087648</LipperId>
        <Language>English</Language>
        <Name>ABICO UK Balanced</Name>
      </AssetIdentityType>
      <AssetIdentityType>
        <LipperId>60079650</LipperId>
        <Language>English</Language>
        <Name>ABIS Flessibile</Name>
      </AssetIdentityType>
    </SearchKeywordByAssetTypeResult>
  </GetSearchKeywordByAssetType_Response_1>
</Body>
</Envelope>

```

Element	Description
LipperId	The asset's Lipper ID.
Language	The display language for asset identity information. Asset identity is the information used to characterize the fund such as LipperID or fund name.
Name	The full name of the asset.



chapter 27 Lipper Utilities

The Lipper Utilities service provides methods that allow the user to retrieve auxiliary data that may be used as parameter values by other Lipper methods in Lipper, such as lists of enumerations for Lipper data types.

The following methods are available in Lipper Utilities:

- **Get Benchmarks (GetBenchmarks_1)** - returns the benchmarks exposed by Lipper.
- **Get Class Schemes (GetClassSchemes_1)** - returns a list of classification schemes supported by Lipper.
- **Get Class Schemes Details (GetClassSchemesDetails_1)** - returns all available information for the given classification scheme and the scheme's classes.
- **Get Country List (GetCountryList_1)** - returns a list of the countries supported in Lipper.
- **Get Cross Reference Codes (GetCrossReferenceCodes_1)** - returns a list of the cross-reference codes supported by Lipper.
- **Get Currency List (GetCurrencyList_1)** - returns a list of the currencies that are supported by Lipper.
- **Get Domiciles (GetDomiciles_1)** - returns a list of the domiciles supported by Lipper.
- **Get EU Tax Directive - (GetEUTaxDirective_1)** - returns the European Union tax directives supported by Lipper.
- **Get Flag Groups (GetFlagGroups_1)** - returns a list of the flag groups supported by Lipper.
- **Get Languages (GetLanguages_1)** - returns a list of the languages supported by Lipper.
- **Get Lipper Leader Score Dates (GetLipperLeaderScoreDates_1)** - returns the date when Lipper Leader Scores (LLS) were last updated.
- **Get Price Estimation (GetPriceEstimation_1)** - returns the price estimation benchmarks exposed by Lipper.
- **Get Risk Free Index (GetRiskFreeIndex_1)** - returns the risk free index benchmarks exposed by Lipper.
- **Get Technical Indicators (GetTechnicalIndicators_1)** - returns the Lipper technical indicators that are exposed by Lipper.
- **Get Universes (GetUniverses_1)** - returns the list of asset universes supported by Lipper.

27.1 Authentication/Authorization, Service Endpoint, and Required Headers

Authorization

All requests to the Lipper Utilities service require an authorization token. For details, see section Understanding Authentication Tokens.

Authentication

The Lipper Utilities service uses Reuters impersonation tokens for each effective user. In this case, Thomson Reuters must create each user before your application authenticates them. Unmanaged effective users are not supported in the Lipper Utilities service.

For additional information on creating a Service Token, see section Creating a Token.

Service Endpoint

Lipper Utilities Endpoint

<http://api.rkd.reuters.com/api/LipperUtilities/LipperUtilities.svc>

Required Header

Required HTTP Headers

POST /api/LipperUtilities/LipperUtilities.svc HTTP/1.1
 Content-Type: application/soap+xml
 Host: api.rkd.reuters.com
 Content-Length: [length]



27.2 WSDL

WSDL:

http://api.rkd.reuters.com/schemas/LipperUtilities/wsd/LipperUtilities_1_HttpAndRKDTOKEN.wsdl

27.3 Get Benchmarks (GetBenchmarks_1)

Use the GetBenchmarks_1 method to retrieve the benchmarks exposed by Lipper.

The example below gets the benchmarks displayed in English language.

XML Sample Request - Getting Benchmarks

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperUtilities/LipperUtilities.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1/GetBenchmarks_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetBenchmarks_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1">
      <language>English</language>
    </GetBenchmarks_Request_1>
  </Body>
</Envelope>
```

Parameter	Description
language	The display language for the returned list of benchmarks.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

The response returns a list of all benchmarks:

XML Sample Response - Getting Benchmarks

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1/GetBenchmarks_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetBenchmarks_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1">
      <GetBenchmarksResult>
        <AssetIdentityType>
          <LipperId>11033839</LipperId>
          <Language>English</Language>
          <Name>50%MSCI Golden Dragon Net + 50%JPM GI Govt Bd TR</Name>
        </AssetIdentityType>
      </GetBenchmarksResult>
    </GetBenchmarks_Response_1>
  </s:Body>
</s:Envelope>
```

```

    </AssetIdentityType>
    <AssetIdentityType>
      <LipperId>11028279</LipperId>
      <Language>English</Language>
      <Name>ABG Nordic TMT CR</Name>
    </AssetIdentityType>
    <AssetIdentityType>
      <LipperId>19074014</LipperId>
      <Language>English</Language>
      <Name>ABI UK - Asia Pacific ex Japan Equities-Life</Name>
    </AssetIdentityType>
    ...
    <AssetIdentityType>
      <LipperId>11020285</LipperId>
      <Language>English</Language>
      <Name>hm. CS Fund of Funds (L) Growth</Name>
    </AssetIdentityType>
  </GetBenchmarksResult>
</GetBenchmarks_Response_1>
</Body>
</Envelope>

```

The list consists of <AssetIdentityType> elements representing asset identities, which are comprised of the asset's Lipper ID, name, and base language.

Element	Description
LipperID	An eight- or nine-digit number that identifies an asset.
Language	The display language for the asset identity information.
Name	The full name of the asset.

27.4 Get Class Schemes (GetClassSchemes_1)

Use the GetClassSchemes_1 method to retrieve a list of classification schemes supported by Lipper.

Class is an abbreviation for 'classification'. A classification is a designation assigned to assets based on various characteristics of the assets. For example, "Equity North America" is a classification assigned to an asset. Classifications are organized into classification schemes. Lipper provides multiple classification schemes around the world. For example, Equity North America is a classification within the Lipper Global Classification scheme.

The example below gets classification schemes and their classes displayed in English language.

XML Sample Request - Getting Class Schemes

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperUtilities/LipperUtilities.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1/GetClassSchemes_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetClassSchemes_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1">
      <language>English</language>
      <provideClasses>true</provideClasses>
    </GetClassSchemes_Request_1>
  </Body>
</Envelope>

```

Parameter	Description



language	The display language for the returned list of classification schemes.
provideClasses	If set to true each classification scheme's classes will be included in the results.
searchString	The classification scheme name for which results should be returned. To receive a list that contains all classification schemes set <searchString> to null.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

The response returns a list of ClassSchemes that contain the supported classification schemes and (optionally) their classes:

XML Sample Response - Getting Class Schemes

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1/GetClassSchemes_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetClassSchemes_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1">
      <GetClassSchemesResult>
        <ClassSchemeOfClassType>
          <ClassSchemeId>1462</ClassSchemeId>
          <ClassSchemeCode>ABIUKBROKER</ClassSchemeCode>
          <ClassSchemeName>UK Broker Fund</ClassSchemeName>
          <Language>English</Language>
          <ClassList>
            <ClassType>
              <ClassId>1463</ClassId>
              <ClassName>Life Adventurous</ClassName>
              <Language>English</Language>
            </ClassType>
            <ClassType>
              <ClassId>1464</ClassId>
              <ClassName>Pension Adventurous</ClassName>
              <Language>English</Language>
            </ClassType>
            ...
            <ClassType>
              <ClassId>30152</ClassId>
              <ClassName>SP MMF Gnrl Undef Dur</ClassName>
              <Language>English</Language>
            </ClassType>
          </ClassList>
        </ClassSchemeOfClassType>
      </GetClassSchemesResult>
    </GetClassSchemes_Response_1>
  </s:Body>
</Envelope>
```

Element	Description
ClassSchemeId	The classification scheme's numeric ID.
ClassSchemeCode	The classification scheme's numeric code.
ClassSchemeName	The name of the classification scheme.
Language	The display language for classification data.
ClassList	The asset's classification list for the classification scheme. Contains the following elements: ClassId - the classification type's numeric ID.



- **ClassName** - the name of the classification type.
- **Language** - the display language for classification data.

27.5 Get Class Scheme Details (GetClassSchemeDetails_1)

Use the GetClassSchemes_1 method to retrieve the classifications which are contained within the classification scheme.

The example below requests all information for the classification scheme with '167' ID and its classes displayed in English language.

XML Sample Request - Getting Class Scheme Details

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperUtilities/LipperUtilities.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1/GetClassSchemeDetails_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetClassSchemeDetails_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1">
      <classSchemeIDs>
        <int>1671</int>
      </classSchemeIDs>
      <language>English</language>
    </GetClassSchemeDetails_Request_1>
  </Body>
</Envelope>
```

Parameter	Description
classSchemeIDs	The ID of the classification scheme for which results should be returned.
language	The display language for the returned classification scheme information.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

The response returns a list of ClassSchemeType that contain information about the specified classification scheme:

XML Sample Response - Getting Class Scheme Details

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1/GetClassSchemeDetails_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetClassSchemeDetails_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1">
      <GetClassSchemeDetailsResult>
        <ClassSchemeOfClassType>
          <ClassSchemeId>1671</ClassSchemeId>
          <ClassSchemeCode>UKOFFSHORE</ClassSchemeCode>
          <ClassSchemeName>Lipper UK Offshore Fund</ClassSchemeName>
          <Language>English</Language>
        </ClassSchemeOfClassType>
      </GetClassSchemeDetailsResult>
    </GetClassSchemeDetails_Response_1>
  </s:Body>
</s:Envelope>
```



```

    <ClassList>
      <ClassType>
        <ClassId>5467</ClassId>
        <ClassName>Equity Nth America Smaller Cos</ClassName>
        <Language>English</Language>
      </ClassType>
      <ClassType>
        <ClassId>5468</ClassId>
        <ClassName>Equity UK Smaller Companies</ClassName>
        <Language>English</Language>
      </ClassType>
      ...
      <ClassType>
        <ClassId>1732</ClassId>
        <ClassName>Equity European Ex UK</ClassName>
        <Language>English</Language>
      </ClassType>
    </ClassList>
  </ClassSchemeOfClassType>
</GetClassSchemeDetailsResult>
</GetClassSchemeDetails_Response_1>
</Body>
</Envelope>

```

Element	Description
ClassSchemeId	The classification scheme's numeric ID.
ClassSchemeCode	The classification scheme's numeric code.
ClassSchemeName	The name of the classification scheme.
Language	The display language for classification data.
ClassList	The asset's classification list for the classification scheme. Contains the following elements: • ClassId - the classification type's numeric ID. • ClassName - the name of the classification type. • Language - the display language for classification data.

27.6 Get Country List (GetCountryList_1)

You can use the GetCountryList_1 method to retrieve a list of the countries supported in Lipper.

The example below gets all countries supported in Lipper and displayed in English language.

XML Sample Request - Getting Country List

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperUtilities/LipperUtilities.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1/GetCountryList_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetCountryList_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1">
      <language>English</language>
    </GetCountryList_Request_1>
  </Body>
</Envelope>

```



Parameter	Description
language	The display language for the returned list of countries.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

See also the `GetDomiciles_1` section.

The response returns a list of `<CountryType>` attributes that include all of the supported countries:

XML Sample Response - Getting Country List

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1/GetCountryList_1_Reply</a:
    Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetCountryList_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1">
      <GetCountryListResult>
        <CountryType>
          <CountryId>787</CountryId>
          <Language>English</Language>
          <CountryName>Andorra</CountryName>
          <CountryCode>AND</CountryCode>
        </CountryType>
        <CountryType>
          <CountryId>792</CountryId>
          <Language>English</Language>
          <CountryName>Argentina</CountryName>
          <CountryCode>ARG</CountryCode>
        </CountryType>
        ...
        <CountryType>
          <CountryId>1012</CountryId>
          <Language>English</Language>
          <CountryName>Vietnam</CountryName>
          <CountryCode>VNM</CountryCode>
        </CountryType>
      </GetCountryListResult>
    </GetCountryList_Response_1>
  </s:Body>
</Envelope>
```

Element	Description
CountryId	The country's numerical Country ID.
Language	The display language for the country information.
CountryName	The name of the country.
CountryCode	The alphabetic country code.

27.7 Get Cross Reference Codes (GetCrossReferenceCodes_1)

Use the `GetCrossReferenceCodes_1` method to retrieve a list of the cross-reference codes supported by Lipper.

A cross-reference code is generally a unique identifier that is used to represent an asset. For example, "ticker symbol" or

CUSIP, or ISIN are cross-reference codes.

The example below requests all cross-reference codes displayed in English:

XML Sample Request - Getting Cross Reference Codes

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperUtilities/LipperUtilities.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1/
    GetCrossReferenceCodes_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetCrossReferenceCodes_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1">
      <language>English</language>
    </GetCrossReferenceCodes_Request_1>
  </Body>
</Envelope>
```

Parameter	Description
language	The display language for the returned list of benchmarks.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

The response returns a list of <CrossReferenceItem> elements that contain all supported cross-reference codes:

XML Sample Response - Getting Cross Reference Codes

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1/
    GetCrossReferenceCodes_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetCrossReferenceCodes_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1">
      <GetCrossReferenceCodesResult>
        <CrossReferenceItem>
          <Language>English</Language>
          <XrefId>4861</XrefId>
          <ReferenceCode>LIPPERSYMBOL</ReferenceCode>
          <CodeFullName>Lipper Symbol (LANA Code)</CodeFullName>
        </CrossReferenceItem>
        <CrossReferenceItem>
          <Language>English</Language>
          <XrefId>4862</XrefId>
          <ReferenceCode>CUSIP</ReferenceCode>
          <CodeFullName>CUSIP</CodeFullName>
        </CrossReferenceItem>
        ...
        <CrossReferenceItem>
          <Language>English</Language>
          <XrefId>31421</XrefId>
          <ReferenceCode>BCNPJ2</ReferenceCode>
          <CodeFullName>Brazilian CNPJ</CodeFullName>
        </CrossReferenceItem>
      </GetCrossReferenceCodesResult>
    </GetCrossReferenceCodes_Response_1>
  </s:Body>
</s:Envelope>
```



```

</CrossReferenceItem>
</GetCrossReferenceCodesResult>
</GetCrossReferenceCodes_Response_1>

</Body>
</Envelope>

```

Element	Description
Language	The display language for the cross-reference information..
XrefId	The numeric cross-reference ID.
ReferenceCode	The alphabetic cross-reference code (e.g., the five-character symbol for a NASDAQ cross-reference).
CodeFullName	The full name of the cross-reference.

27.8 Get Currency List (GetCurrencyList_1)

To get a list of the currencies that are supported by Lipper use the GetCurrencyList_1 method.

The example below get all the currencies displayed in English language.

XML Sample Request - Getting Currency List

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperUtilities/LipperUtilities.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1/GetCurrencyList_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetCurrencyList_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1">
      <language>English</language>
    </GetCurrencyList_Request_1>
  </Body>
</Envelope>

```

Parameter	Description
language	The display language for the returned list of currencies.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

The response returns a list of currencies:

XML Sample Response - Getting Currency List

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1/GetCurrencyList_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetCurrencyList_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1">
      <language>English</language>
      <Currencies>
        <CrossReferenceItem>
          <XrefId>1</XrefId>
          <ReferenceCode>A</ReferenceCode>
          <CodeFullName>American</CodeFullName>
        </CrossReferenceItem>
      </Currencies>
    </GetCurrencyList_Response_1>
  </s:Body>
</s:Envelope>

```



```

</s:Header>
<s:Body>
  <GetCurrencyList_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1">
    <GetCurrencyListResult>
      <CurrencyType>
        <CurrencyId>10000029</CurrencyId>
        <Language>English</Language>
        <CurrencyCode>LC</CurrencyCode>
        <Name>&lt;No Currency&gt;</Name>
      </CurrencyType>
      <CurrencyType>
        <CurrencyId>10000046</CurrencyId>
        <Language>English</Language>
        <CurrencyCode>ALL</CurrencyCode>
        <Name>Albania Lek</Name>
      </CurrencyType>
      <CurrencyType>
        <CurrencyId>10000047</CurrencyId>
        <Language>English</Language>
        <CurrencyCode>DZD</CurrencyCode>
        <Name>Algeria Dinar</Name>
      </CurrencyType>
      ...
      <CurrencyType>
        <CurrencyId>10000208</CurrencyId>
        <Language>English</Language>
        <CurrencyCode>ZWD</CurrencyCode>
        <Name>Zimbabwe Dollar</Name>
      </CurrencyType>
    </GetCurrencyListResult>
  </GetCurrencyList_Response_1>
</Body>
</Envelope>

```

Element	Description
CurrencyId	The numeric Currency ID.
Language	The Language ID that represents the language for the currency.
CurrencyCode	The alphabetic currency code.
Name	The name of the currency.

27.9 Get Domiciles (GetDomiciles_1)

To get a list of the domiciles supported by Lipper use the GetDomiciles_1 method.

GetDomiciles_1 is a method that retrieves the set of possible asset domiciles that Lipper tracks globally, while GetCountryList_1 is a method that retrieves the set of possible asset registered for sale countries that Lipper tracks globally.

The domicile of a fund is the country in which the asset is incorporated whereas the registered for sale country is/are the country(s) where shares in the asset can be bought and sold.

The example below shows how to request a list of domiciles displayed in English language:

XML Sample Request - Getting Domiciles

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperUtilities/LipperUtilities.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1/GetDomiciles_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    ...
  </Body>
</Envelope>

```



</Authorization> </Header> <Body>
<GetDomiciles_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1"> <language>English</language> </GetDomiciles_Request_1>
</Body> </Envelope>

Parameter	Description
language	The display language for the returned domicile list.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

The response returns a list of <CountryType> elements that include all of the domiciles:

XML Sample Response - Getting Domiciles

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1/GetDomiciles_1_Reply</a:
    Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetDomiciles_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1">
      <GetDomicilesResult>
        <CountryType>
          <CountryId>13567</CountryId>
          <Language>English</Language>
          <CountryName>Algeria</CountryName>
          <CountryCode>DZA</CountryCode>
        </CountryType>
        <CountryType>
          <CountryId>300</CountryId>
          <Language>English</Language>
          <CountryName>Andorra</CountryName>
          <CountryCode>AND</CountryCode>
        </CountryType>
        ...
        <CountryType>
          <CountryId>10114</CountryId>
          <Language>English</Language>
          <CountryName>Virgin Islands (U.S.)</CountryName>
          <CountryCode>VIR</CountryCode>
        </CountryType>
      </GetDomicilesResult>
    </GetDomiciles_Response_1>
  </s:Body>
</Envelope>

```

Element	Description
CountryId	The country's numerical Country ID.
Language	The display language for the country information.
CountryName	The name of the country.
CountryCode	The alphabetic country code.



27.10 Get EU Tax Directive (GetEUTaxDirective_1)

Use the GetEUTaxDirective_1 method to retrieve the possible set of attributes that identify interest income information pertinent to the European Union Savings Directive.

The example below requests EU tax directives displayed in English language:

XML Sample Request - Getting EU Tax Directives

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperUtilities/LipperUtilities.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1/GetEUTaxDirective_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetEUTaxDirective_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1">
      <language>English</language>
    </GetEUTaxDirective_Request_1>
  </Body>
</Envelope>
```

Parameter	Description
language	The display language for the returned list of EU Tax Directives.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

The response returns a list of <EUTaxAttributeType> elements that contain EU tax directives:

XML Sample Response - Getting EU Tax Directives

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1/GetEUTaxDirective_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetEUTaxDirective_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1">
      <GetEUTaxDirectiveResult>
        <EUTaxAttributeType>
          <AttributeId>1395</AttributeId>
          <Language>English</Language>
          <AttributeName>China QDII</AttributeName>
        </EUTaxAttributeType>
        <EUTaxAttributeType>
          <AttributeId>1396</AttributeId>
          <Language>English</Language>
          <AttributeName>Infrastructure Fund</AttributeName>
        </EUTaxAttributeType>
        ...
        <EUTaxAttributeType>
          <AttributeId>7805</AttributeId>
```



```

    <Language>English</Language>
    <AttributeName>Dividend TIIA</AttributeName>
  </EUTaxAttributeType>
</GetEUTaxDirectiveResult>
</GetEUTaxDirective_Response_1>

</Body>
</Envelope>

```

Element	Description
AttributeId	The numerical EU Tax Attribute ID.
Language	The display language for the EU tax attributes.
AttributeName	The name of the EU Tax Attribute.

27.11 Get Flag Groups (GetFlagGroups_1)

The GetFlagGroups_1 method is used to retrieve a list of the flag groups supported by Lipper along with each group's associated flag list, if requested.

In this method, a flag is specifically a Boolean asset attribute. Flags are organized into flag groups so that a flag is a part of a flag group.

Note: Flag is another term for attribute. In the context of Lipper Web Services, the <flag> element represents an attribute that Lipper has assigned to the asset.

The example below requests data for the flag group with '7800' ID along with associated flag list and flag with '7805' ID and displayed in English language:

XML Sample Request - Getting Flag Groups

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperUtilities/LipperUtilities.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1/GetFlagGroups_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetFlagGroups_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1">
      <language>English</language>
      <flagGroup>7800</flagGroup>
      <flagID>7805</flagID>
      <provideFlagList>true</provideFlagList>
    </GetFlagGroups_Request_1>
  </Body>
</Envelope>

```

Parameter	Description
language	The language ID that represents the display language for the returned flag group list.
flagGroup	The ID of the flag group for which information should be returned. If set to null all flag groups will be included.
flagID	The ID of the flag for which information should be returned. If set to null all flags will be returned.
provideFlagList	A flag that indicates if the flag group's associated flag list should be included in the results.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.



Note:

- If **<flagID>** is not null and **<provideFlagList>** is true then only information for the given Flag ID will be returned.
- If **<flagID>** is null and **<provideFlagList>** is true all flags for the flag set in **<flagGroup>** will be returned.

The response returns a list of **<FlagGroupType>** elements that contain the flag groups and their associated flag lists:

XML Sample Response - Getting Flag Groups

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1/GetFlagGroups_1_Reply</a:
    Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetFlagGroups_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1">
      <GetFlagGroupsResult>
        <FlagGroupType>
          <Language>English</Language>
          <FlagGroupId>7800</FlagGroupId>
          <FlagGroupCode>EUTAX</FlagGroupCode>
          <FlagGroupName>EU Tax Directive</FlagGroupName>
          <FlagList>
            <FlagItem>
              <FlagId>7805</FlagId>
              <FlagName>Dividend TIIA</FlagName>
              <FlagCode>EUDIV</FlagCode>
            </FlagItem>
            <FlagItem>
              <FlagId>7805</FlagId>
              <FlagName>Dividend TIIA</FlagName>
              <FlagCode>EUDIV</FlagCode>
              <FlagValue>Y</FlagValue>
            </FlagItem>
          </FlagList>
        </FlagGroupType>
      </GetFlagGroupsResult>
    </GetFlagGroups_Response_1>
  </s:Body>
</Envelope>
```

Element	Description
Language	The display language for the flag group information.
FlagGroupId	The numerical flag group ID.
FlagGroupCode	The alphabetic flag group code.
FlagGroupName	The name of the flag group.
FlagList	The flag group's flag list consisting of <FlagItem> elements. Contains the following elements: • FlagId - the numeric flag ID. • FlagName - the name of the flag. • FlagCode - the alphabetic flag code. • FlagValue - the flag value, which is either 'Y' (YES) or 'N' (NO).

27.12 Get Languages (GetLanguages_1)

To get a list of all languages supported by Lipper use the GetLanguages_1 method.

The example below retrieves data for Thai language.

XML Sample Request - Getting Languages

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperUtilities/LipperUtilities.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1/GetLanguages_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetLanguages_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1">
      <language>Thai</language>
    </GetLanguages_Request_1>
  </Body>
</Envelope>

```

Parameter	Description

language	The display language for the returned list of languages.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

The response returns a list of <LanguageType> elements that contain all of the supported languages:

XML Sample Response - Getting Languages

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1/GetLanguages_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetLanguages_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1">
      <GetLanguagesResult>
        <LanguageType>
          <Language>Thai</Language>
          <LanguageName>English</LanguageName>
          <LanguageCode>ENG</LanguageCode>
          <ResultLanguageId>2</ResultLanguageId>
        </LanguageType>
        <LanguageType>
          <Language>Thai</Language>
          <LanguageName>French</LanguageName>
          <LanguageCode>FRE</LanguageCode>
          <ResultLanguageId>2</ResultLanguageId>
        </LanguageType>
        ...
        <LanguageType>
          <Language>Thai</Language>
          <LanguageName>Thai</LanguageName>
          <LanguageCode>THA</LanguageCode>
          <ResultLanguageId>2</ResultLanguageId>
        </LanguageType>
      </GetLanguagesResult>
    </GetLanguages_Response_1>
  </s:Body>
</Envelope>

```



Element	Description
Language	The display language for the language information.
LanguageName	The name of the language.
LanguageCode	The alphabetic language code.
ResultLanguageId	The numerical language ID.

27.13 Get Lipper Leader Score Dates (GetLipperLeaderScoreDates_1)

You can use the GetLipperLeaderScoreDates_1 method to retrieve the dates when Lipper Leader Scores (LLS) were last updated for the specified asset(s).

Lipper Leader Score is a rating (1-5, with 5 being high) that Lipper assigns to a fund. Lipper Leader Scores are given for a number of categories: total return, consistent return, preservation, tax efficiency, and expense.

The example below requests dates for the assets with '65028707' and '60003333' IDs:

XML Sample Request - Getting Lipper Leader Score Dates

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperUtilities/LipperUtilities.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1/GetLipperLeaderScoreDates_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetLipperLeaderScoreDates_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1">
      <lipperIDs>
        <int>65028707</int>
        <int>60003333</int>
      </lipperIDs>
    </GetLipperLeaderScoreDates_Request_1>
  </Body>
</Envelope>
```

Parameter	Description
lipperIDs	A list of one or more Lipper IDs for which data will be returned. A Lipper ID is a unique eight- or nine-digit number (e.g., 60003333) that identifies an asset.

The response returns a list of <DataDateType> elements that contain the list of dates for which Lipper Leader Scores are available.

XML Sample Response - Getting Lipper Leader Score Dates

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1/GetLipperLeaderScoreDates_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
  </s:Header>
  <s:Body>
    <DataDateType>
      <Date>2009-04-17T10:41:48.639875Z</Date>
    </DataDateType>
  </s:Body>
</s:Envelope>
```



```

    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetLipperLeaderScoreDates_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1">
      <GetLipperLeaderScoreDatesResult>
        <DataDateType>
          <LipperId>60003333</LipperId>
          <DataDate>2009-02-27</DataDate>
        </DataDateType>
        <DataDateType>
          <LipperId>60003333</LipperId>
          <DataDate>2009-01-30</DataDate>
        </DataDateType>
        <DataDateType>
          <LipperId>60003333</LipperId>
          <DataDate>2008-12-31</DataDate>
        </DataDateType>
        ...
        <DataDateType>
          <LipperId>60003333</LipperId>
          <DataDate>2004-04-30</DataDate>
        </DataDateType>
      </GetLipperLeaderScoreDatesResult>
    </GetLipperLeaderScoreDates_Response_1>
  </Body>
</Envelope>

```

Element	Description
LipperId	The asset's Lipper ID.
DataDate	The date when LLS was last updated.

27.14 Get Price Estimation (GetPriceEstimation_1)

Use the GetPriceEstimation_1 method to retrieve the price estimation benchmarks exposed by Lipper.

A price estimation benchmark is a benchmark that allows for future development of estimated price technology.

The example below returns price estimation displayed in English language:

XML Sample Request - Getting Price Estimation

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperUtilities/LipperUtilities.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1/GetPriceEstimation_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetPriceEstimation_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1">
      <language>English</language>
    </GetPriceEstimation_Request_1>
  </Body>
</Envelope>

```

Parameter	Description
language	The display language for the returned price estimation list.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the

language option.

The response returns a list <AssetIdentityType> elements that contains the price estimation benchmarks:

XML Sample Response - Getting Price Estimation

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1/GetPriceEstimation_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetPriceEstimation_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1">
      <GetPriceEstimationResult>
        <AssetIdentityType>
          <LipperId>11000480</LipperId>
          <Language>English</Language>
          <Name>Barclays Capital Euro Aggregate TR</Name>
        </AssetIdentityType>
        <AssetIdentityType>
          <LipperId>11000481</LipperId>
          <Language>English</Language>
          <Name>Barclays Capital U.S. Corporate High Yield TR</Name>
        </AssetIdentityType>
        <AssetIdentityType>
          <LipperId>11000714</LipperId>
          <Language>English</Language>
          <Name>Citigroup EMU GBI TR</Name>
        </AssetIdentityType>
        ...
        <AssetIdentityType>
          <LipperId>11020028</LipperId>
          <Language>English</Language>
          <Name>Topix TR</Name>
        </AssetIdentityType>
      </GetPriceEstimationResult>
    </GetPriceEstimation_Response_1>
  </s:Body>
</Envelope>
```

Element	Description
LipperId	The asset's Lipper ID.
Language	The display language for the price estimation data.
Name	The full name of the asset.

27.15 Get Risk Free Index (GetRiskFreeIndex_1)

The GetRiskFreeIndex_1 method retrieves the risk free index benchmarks exposed by Lipper.

A risk free index is a benchmark comprised of 'riskless' assets such as three-month Treasury Bills.

The example below returns Risk Free Index benchmarks displayed in English language:

XML Sample Request - Getting Risk Free Index

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperUtilities/LipperUtilities.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
  </Header>
  <Body>
    <GetRiskFreeIndex_1 />
  </Body>
</Envelope>
```



```

<Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1/
GetRiskFreeIndex_1</Action>
<Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
  <ApplicationID>[AppID]</ApplicationID>
  <Token>[service token]</Token>
</Authorization>
</Header>
<Body>
  <GetRiskFreeIndex_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1">
    <language>English</language>
  </GetRiskFreeIndex_Request_1>
</Body>
</Envelope>

```

Parameter	Description
language	The display language for the returned list of Risk Free index benchmarks.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

The response returns a list of <AssetIdentityType> elements that contain the risk free index benchmarks:

XML Sample Response - Getting Risk Free Index

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1/GetRiskFreeIndex_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetRiskFreeIndex_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1">
      <GetRiskFreeIndexResult>
        <AssetIdentityType>
          <LipperId>11029718</LipperId>
          <Language>English</Language>
          <Name>Argentinian Peso 3 Months</Name>
        </AssetIdentityType>
        <AssetIdentityType>
          <LipperId>11020090</LipperId>
          <Language>English</Language>
          <Name>BIBOR THB 3 Months</Name>
        </AssetIdentityType>
        ...
        <AssetIdentityType>
          <LipperId>11032859</LipperId>
          <Language>English</Language>
          <Name>VNIBOR VND 3 Months</Name>
        </AssetIdentityType>
      </GetRiskFreeIndexResult>
    </GetRiskFreeIndex_Response_1>
  </s:Body>
</Envelope>

```

Element	Description
LipperId	The asset's Lipper ID.
Language	The display language for the Risk Free Index information.
Name	The full name of the asset.



27.16 Get Technical Indicators (GetTechnicalIndicators_1)

The GetTechnicalIndicators_1 method retrieves the Lipper technical indicators that are exposed by Lipper.

A technical indicator is a benchmark that, based on statistical calculations, makes a very good benchmark for the asset.

The example below requests data for technical indicators displayed in English language:

XML Sample Request - Getting Technical Indicators

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperUtilities/LipperUtilities.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1/GetTechnicalIndicators_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetTechnicalIndicators_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1">
      <language>English</language>
    </GetTechnicalIndicators_Request_1>
  </Body>
</Envelope>
```

Parameter	Description

language	The display language for the returned list of technical indicators.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

The response returns a list of <AssetIdentityType> elements that contain the technical indicators:

XML Sample Response - Getting Technical Indicators

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1/GetTechnicalIndicators_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetTechnicalIndicators_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1">
      <GetTechnicalIndicatorsResult>
        <AssetIdentityType>
          <LipperId>19005011</LipperId>
          <Language>English</Language>
          <Name>ABI UK Old - European Inc UK-Life</Name>
        </AssetIdentityType>
        <AssetIdentityType>
          <LipperId>11000654</LipperId>
          <Language>English</Language>
          <Name>AEX CR</Name>
        </AssetIdentityType>
        ...
        <AssetIdentityType>
```



```

    <LipperId>11029151</LipperId>
    <Language>English</Language>
    <Name>Vietnam CR</Name>
  </AssetIdentityType>
  </GetTechnicalIndicatorsResult>
</GetTechnicalIndicators_Response_1>

</Body>
</Envelope>

```

Element	Description
LipperId	The asset's Lipper ID.
Language	The display language for the Risk Free Index information.
Name	The full name of the asset.

27.17 Get Universes (GetUniverses_1)

Use the GetUniverses_1 method to retrieve the list of asset universes supported by Lipper.

See also the GetDomiciles_1 method.

The example below requests universes displayed in English language:

XML Sample Request - Getting Universes

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/LipperUtilities/LipperUtilities.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1/GetUniverses_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetUniverses_Request_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1">
      <language>English</language>
    </GetUniverses_Request_1>
  </Body>
</Envelope>

```

Parameter	Description
language	The display language for the returned list of benchmarks.

Note: Lipper automatically defaults to American English if the requested data is unavailable in the language specified in the language option.

The response returns a list of <UniverseType> elements that contain the supported asset universes:

XML Sample Response - Getting Universes

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1/GetUniverses_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-04-17T10:41:48.639875Z</Date>
      <DoNotStore />
    </CacheResponse>
  </s:Header>
  <s:Body>
    <GetUniverses_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1">
      <UniverseType>
        <UniverseType>
          <AssetIdentityType>
            <LipperId>11029151</LipperId>
            <Language>English</Language>
            <Name>Vietnam CR</Name>
          </AssetIdentityType>
          <GetTechnicalIndicatorsResult>
            <GetTechnicalIndicators_Response_1>
              <Body>
                <GetUniverses_Request_1>
                  <language>English</language>
                </GetUniverses_Request_1>
              </Body>
            </GetTechnicalIndicators_Response_1>
          </GetTechnicalIndicatorsResult>
        </UniverseType>
      </UniverseType>
    </GetUniverses_Response_1>
  </s:Body>
</s:Envelope>

```



```
<a:RelatesTo>[MessageID]</a:RelatesTo>
</s:Header>
<s:Body>
  <GetUniverses_Response_1 xmlns="http://www.reuters.com/ns/2009/01/01/webservices/rkd/LipperUtilities_1">
    <GetUniversesResult>
      <UniverseType>
        <UniverseId>11528</UniverseId>
        <Language>English</Language>
        <UniverseCode>AUS</UniverseCode>
        <UniverseName>Australia</UniverseName>
      </UniverseType>
      <UniverseType>
        <UniverseId>5693</UniverseId>
        <Language>English</Language>
        <UniverseCode>AUT</UniverseCode>
        <UniverseName>Austria</UniverseName>
      </UniverseType>
      ...
      <UniverseType>
        <UniverseId>5700</UniverseId>
        <Language>English</Language>
        <UniverseCode>USA</UniverseCode>
        <UniverseName>United States</UniverseName>
      </UniverseType>
    </GetUniversesResult>
  </GetUniverses_Response_1>
</Body>
</Envelope>
```

Element	Description
UniverseId	The numeric Universe ID.
Language	The language ID that represents the display language for the universe information.
UniverseCode	The alphabetic universe code.
UniverseName	The name of the universe.



chapter 28 News

The Thomson Reuters News service allows you to query for headlines and also retrieve news content. The service also includes symbol resolution and ambiguous symbol handling.

Note: Thomson Reuters News service can retrieve news content in Traditional Chinese format. To convert it to Simplified Chinese, pass the "ZH-Hans" parameter in the request.

28.1 Authentication/Authorization, Service Endpoint, and Required Headers

Authorization

All requests to the Thomson Reuters News service require an authorization token. For details, see section Understanding Authentication Tokens.

Authentication

Thomson Reuters News uses Reuters impersonation tokens for each effective user. In this case, Thomson Reuters must create each user before your application authenticates them. Unmanaged effective users are not supported in Thomson Reuters News.

For additional information on creating a Service Token, see section Creating a Token.

Service Endpoint

Thomson Reuters News Endpoint

<http://api.rkd.reuters.com/api/News/News.svc>

Required Header

Required HTTP Headers

POST /api/News/News.svc HTTP/1.1
Content-Type: application/soap+xml
Host: api.rkd.reuters.com
Content-Length: [length]

28.2 WSDL

WSDL:

http://api.rkd.reuters.com/schemas/News/wsd/News_1_HttpAndRKDToken.wsdl

28.3 Retrieve Headlines (RetrieveHeadlineML_Request_1)

The RetrieveHeadlineML_1 request retrieves headlines for stories that match specific requirements. For complex searches, RetrieveHeadlineML_1 supports sophisticated search filters that express complex Boolean criteria. These filters can incorporate keywords, companies, products, etc., as well as metadata such as story time, news provider, and language - and can be used in a single query.

Note: The number of headlines returned by a response is limited to 4020 in TRKD API. Headlines and corresponding stories

can only be retrieved for the last 90 days.

28.3.1 Retrieve Headlines Request

The following example shows how to retrieve headlines.

XML Sample Request - Retrieve Headlines

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/News/News.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/News_1/RetrieveHeadlineML_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <RetrieveHeadlineML_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/News_1">
      <HeadlineMLRequest>
        <Timeout>600</Timeout>
        <MaxCount>10</MaxCount>
        <MaxCountPerFilter>true</MaxCountPerFilter>
        <StartTime>2007-09-28T00:00:00</StartTime>
        <EndTime>2007-09-29T00:00:00</EndTime>
        <Direction>Newer</Direction>
        <Filter>
          <FreeTextConstraint xmlns="http://schemas.reuters.com/ns/2006/04/14/rmds/webservices/news/filter" where="body">
            <Value modifier="not">microsoft</Value>
          </FreeTextConstraint>
        </Filter>
      </HeadlineMLRequest>
    </RetrieveHeadlineML_Request_1>
  </Body>
</Envelope>
```

Attribute	Description
Timeout	Defines maximum time in seconds to wait for a response (optional). Default is 60 seconds.
MaxCount	Defines maximum number of items to be fetched (optional). Default is 20.
MaxCountWorkAround	Allows implementing custom functionality. Do not use MaxCountWorkAround unless instructed/advised by the Thomson Reuters TRKD API team. MaxCountWorkAround is not compatible with MaxCountPerFilter.
MaxCountPerFilter	A Boolean that applies only when more than one filter is in effect. If it is set to true, the service will attempt to return MaxCount items for every filter (optional). If it is set to false, the service will return only the first headlines found, up to a maximum of MaxCount. This means that the results of some filters are not included in the returned data. Default is false. Important! MaxCountPerFilter is not supported!
StartTime	Defines the start of a time window within which news stories must fall (optional). Every story returned will have a revision time that is greater than or equal to this value.
EndTime	Defines the end of a time window within which news stories must fall (optional). Every story returned will have a revision time that is less than or equal to this value. Default is the current time.
Direction	Specifies whether the search begins at the EndTime and moves backward ("Older"), or begins at the StartTime and moves forward ("Newer") (optional). Default is "Older".
Filter	Complex search criteria, as discussed below. Optional.

Important! Keep in mind that SOAP body of each request must not exceed 4096 bytes. If SOAP body of your request exceeds the specified value, it will be rejected with the following SOAP fault:

SOAP Fault Reply



```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Faults_1/Fault_1_Reply</a:Action>
    <a:RelatesTo>c0e5282bc42543ebac527a73688f0167</a:RelatesTo>
  </s:Header>
  <s:Body>
    <s:Fault>
      <s:Code>
        <s:Value>s:Receiver</s:Value>
        <s:Subcode>
          <s:Value xmlns:a="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Faults_1">a:General_Errors</s:Value>
        </s:Subcode>
      </s:Code>
      <s:Reason>
        <s:Text xml:lang="en-GB">Backend error: INVALID_INPUT</s:Text>
      </s:Reason>
      <s:Detail>
        <ClientErrorReference xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Faults_1" xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
          <Timestamp>2011-05-04T18:43:07.3339927Z</Timestamp>
          <ErrorReference>1ba537869c6341a88ed919a7d03ac5c3</ErrorReference>
          <ServerReference>72EA12F9DE9CF37374C798B03C8A7CC51492C25800DDD626</ServerReference>
        </ClientErrorReference>
      </s:Detail>
    </s:Fault>
  </s:Body>
</s:Envelope>

```

28.3.2 Filters

Complex search criteria are specified by using XML elements called filters and constraints to represent the terms of a Boolean expression. Like the terms of a Boolean expression, these elements contain one or more statements to evaluate, can be combined using logical operators (AND, OR, ANDNOT), and can be nested within other terms. Searches can be constructed to perform free text searches (e.g., look for "Sun" anywhere in the headline), or look for specific meta-data (e.g., COMPANY="SUNW", LANGUAGE="EN", etc.), or both.

Filters are composed of one or more constraints. Similar to an Internet search expression, a constraint supports an arbitrarily complex set of criteria for a single field (or for the combined text of the headline and body, treated as a single field). For instance, a constraint might require that the body of a story must contain either "IBM" or "Lenovo", and either "Linux" or "Unix", and "laptop", and "China". A constraint can be either a free-text constraint (which searches the headline, body, or both) or a meta-data constraint (which searches meta-data fields).

Since a filter can contain more than one constraint, it can specify search criteria for more than one field. For instance, a filter might use multiple constraints to specify a story on the topic "iPod", written in French, with the word "video" anywhere in the text. Multiple fields can be involved, and free-text searches can be combined with meta-data searches.

Logical operations are represented by using a corresponding element type. There are filters and constraints for AND, OR, and ANDNOT. For an AND element to evaluate as True, all its sub-elements must be True. For an OR element to evaluate as True, at least one of its sub-elements must be True. For an ANDNOT element to evaluate as True, its first element must be True and all of its subsequent elements must be False.

In a FreeTextConstraint, the optional "Where" attribute specifies the field in which to perform the free text search - "headline", "body", or "both". The default value is "both".

In a MetadataConstraint, the required Class attribute specifies the metadata fields in which to search. Since the NDS category list is not fixed, this attribute is not restricted either. However, any NDS installation is expected to support at least the following metadata categories:

- "companies";
- "products";
- "topics";
- "attribution";
- "provider";
- "language";
- "instruments";



- "any" (i.e., any of the available metadata).

In addition, "providedby" is a special pseudo-category, used only to allow for "match-all" expression. The following expression always matches every story in the NDS news archive:

```
<MetaDataConstraint xmlns="http://schemas.reuters.com/ns/2006/04/14/rmds/webservices/news/filter" class="providedby">
  <Value>NDS</Value>
</MetaDataConstraint>
```

The following sample XML describes a Filter element that would search for Reuters stories about Microsoft and Yahoo that include the word "merger" in the headline text:

```
<Filter>
  <And xmlns="http://schemas.reuters.com/ns/2006/04/14/rmds/webservices/news/filter">
    <MetaDataConstraint class="Attribution">
      <Value>Reuters</Value>
    </MetaDataConstraint>
    <MetaDataConstraint class="Companies">
      <And>
        <Value>MSFT.O</Value>
        <Value>YHOO.O</Value>
      </And>
    </MetaDataConstraint>
    <FreeTextConstraint where="headline">
      <Value>Merger</Value>
    </FreeTextConstraint>
  </And>
</Filter>
```

Note: You have to use RICs to identify a company.

28.3.3 Understanding Retrieve Headlines Response

XML Sample Response - Retrieve Headlines

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/rkd/News_1/RetrieveHeadlineML_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <RetrieveHeadlineML_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/News_1">
      <HeadlineMLResponse>
        <Status>
          <StatusMsg>OK</StatusMsg>
          <StatusCode>0</StatusCode>
        </Status>
        <Context>
          <Newer>2008-02-05T14:51:05+02:00</Newer>
          <Older>2008-02-05T14:48:55+02:00</Older>
        </Context>
        <HEADLINEML>
          <HL xmlns="http://schemas.reuters.com/ns/2006/04/14/rmds/webservices/news/headline" space="preserve">
            <ID>urn:newsml:reuters.com:20080205:nL05165606:2</ID>
            <RE>2</RE>
            <ST>Usable</ST>
            <CT>2008-02-05T14:51:05+02:00</CT>
            <RT>2008-02-05T14:51:05+02:00</RT>
            <LT>2008-02-05T14:48:44+02:00</LT>
            <PR>reuters.com</PR>
            <AT>RTRS</AT>
            <UR>4</UR>
            <LN>en</LN>
            <HT>UPDATE 1-Kuwait c.bank unhappy about high domestic inflation</HT>
            <TY>story</TY>
            <PE>511 376 381 405 416 432 434 461 478</PE>
            <CO />
            <TN>1</TN>
          </HL>
        </HEADLINEML>
      </HeadlineMLResponse>
    </RetrieveHeadlineML_Response_1>
  </Body>
</Envelope>
```



```

<HL xmlns="http://schemas.reuters.com/ns/2006/04/14/rmds/webservices/news/headline" space="preserve">
  <ID>urn:newsml:reuters.com:20080205:nBNG143954:2</ID>
  <RE>2</RE>
  <ST>Usable</ST>
  <CT>2008-02-05T14:50:53+02:00</CT>
  <RT>2008-02-05T14:50:53+02:00</RT>
  <LT>2008-02-05T14:48:31+02:00</LT>
  <PR>reuters.com</PR>
  <AT>RTRS</AT>
  <UR>4</UR>
  <LN>en</LN>
  <HT>US RESEARCH NEWS-Piper cuts VCA Antech - theflyonthewall.com</HT>
  <TY>story</TY>
  <PE>511 394 433 452 492</PE>
  <CO>APD.N GBX.N WOOF.O</CO>
  <TN>1</TN>
</HL>
...
<HL xmlns="http://schemas.reuters.com/ns/2006/04/14/rmds/webservices/news/headline" space="preserve">
  <ID>urn:newsml:reuters.com:20080205:nVMN258c9a:2</ID>
  <RE>2</RE>
  <ST>Usable</ST>
  <CT>2008-02-05T14:48:55+02:00</CT>
  <RT>2008-02-05T14:48:55+02:00</RT>
  <LT>2008-02-05T14:46:34+02:00</LT>
  <PR>reuters.com</PR>
  <AT>VMN</AT>
  <UR>4</UR>
  <LN>en</LN>
  <HT>To Present at the BIO CEO & Investor Conference And Participate on the Non Cancer Immunotherapy Panel
  <Origin Href='QuoteRef'>VAS.TO</Origin> </HT>
  <TY>story</TY>
  <PE>339</PE>
  <CO>VSGN.O VAS.TO</CO>
  <TN>1</TN>
</HL>
</HEADLINEML>
</HeadlineMLResponse>
</RetrieveHeadlineML_Response_1>
</Body>
</Envelope>

```

Note: The number of headlines returned by a response is limited to 4020 in TRKD API. Headlines and corresponding stories can only be retrieved for the last 90 days.

The **Status** contains an integer StatusCode and a StatusMsg for which values include: **"OK"**, **"ACCESS_DENIED"**, **"INVALID_REQUEST"**.

If headlines are found, the **Context** element contains two values - **Newer** and **Older** - that provide the revision times of the oldest and newest headlines returned. Although the xsd:dateTime supports millisecond precision, NDS revision times are incremented in whole seconds, so the actual values of Newer and Older will always be in whole seconds. These values may be used as the StartTime or EndTime elements in subsequent headline requests in order to page forward or backward in time through more search results. However, using this technique will always result in at least one headline from the last set being returned in the next set - and in some cases more than one, since it will sometimes be the case that multiple headlines have the same revision time.

Headlines are represented as zero or more HL elements in a HeadlineML structure.

Mandatory Element	Description
ID	Globally unique ID.
RE	News item revision number.
ST	Status (as defined by IPTS dictionary): - Usable - Embargoed - Withheld - Canceled



CT	News item Creation Time in ISO format.
RT	News item Revision Time in ISO format.
LT	Local Time in ISO format.
PR	News item provider.
AT	News attribution.
UR	News item urgency (as defined by IPTS dictionary). These are actually numeric values from 1 to 5. The default value is 4 - Normal. 1. Bulletin 2. Alert 3. News Break 4. Normal 5. Feature
LN	2-letter ISO language code.
HT	News item headline text.
TY	This field may contain the following values: • "story" - the story contains no alerts; • "alert" - the story contains alert(s) only; • "both" - the story contains both alert (s) and headline/body.

Optional Element	Description
PE	PE values - multiple values are separated by a space.
CO	Companies (RICs) - multiple values are separated by a space.
TO	Topics - multiple values are separated by a space.
NI	Named item.
TN	Take Number is used to indicate the story "take", which is incremented with each story revision. If it equals zero, then the headline does not yet have a story. If it is greater than zero, then there is some story associated with the headline.
TE	Story text.
PD	Products.

28.4 Retrieve Story (RetrieveStoryML_Request_1)

This operation performs the simple task of retrieving a single news item based on a unique story ID. The data is returned in the Thomson Reuters proprietary StoryML format (contains more detailed information).

The StoryRequest structure consists of zero or more StoryID elements and an optional TimeOut (in whole seconds) that specifies how long the application can wait for a response. The StoryID is a NewsML URN, of the form urn:newsml:[provider id]:[date]:[doc id], e.g., "urn:newsml:reuters.com:20001106:nJI6SS016".

Note: The full <StoryId>=urn:newsml:[provider id]:[date]:[newsstoryid]:[digit] where the last digit after the colon states the specific news story version number. So, this urn "urn:newsml:reuters.com:20090617:<newsstoryid>:6" means that the specified story has 6 versions. By default, the most recent version is automatically selected and displayed. Or you can manually request the most recent version by eliminating the last digit after the colon ("6") to display the most recent version of the news story.

The following example retrieves news story for the specified story ID:

XML Sample Request - Retrieve Story

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/News/News.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/News_1/RetrieveStoryML_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
    
```



```

    <Token>[Impersonation Token]</Token>
  </Authorization>
</Header>
<Body>
  <RetrieveStoryML_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/News_1">
    <StoryMLRequest>
      <Timeout>600</Timeout>
      <StoryId>urn:newsml:reuters.com:20080205:nRNSE3284N:5</StoryId>
    </StoryMLRequest>
  </RetrieveStoryML_Request_1>
</Body>
</Envelope>

```

Important! Keep in mind that you can retrieve up to 30 stories at a time. If you specify more than 30 stories (StoryIds), the request will be rejected with the following SOAP fault:

SOAP Fault Reply

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Faults_1/Fault_1_Reply</a:Action>
    <a:RelatesTo>c0e5282bc42543ebac527a73688f0167</a:RelatesTo>
  </s:Header>
  <s:Body>
    <s:Fault>
      <s:Code>
        <s:Value>s:Receiver</s:Value>
        <s:Subcode>
          <s:Value xmlns:a="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Faults_1">a:General_Errors</s:Value>
        </s:Subcode>
      </s:Code>
      <s:Reason>
        <s:Text xml:lang="en-GB">Backend error: INVALID_INPUT</s:Text>
      </s:Reason>
      <s:Detail>
        <ClientErrorReference xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Faults_1" xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
          <Timestamp>2011-05-04T18:43:07.3339927Z</Timestamp>
          <ErrorReference>1ba537869c6341a88ed919a7d03ac5c3</ErrorReference>
          <ServerReference>72EA12F9DE9CF37374C798B03C8A7CC51492C25800DDD626</ServerReference>
        </ClientErrorReference>
      </s:Detail>
    </s:Fault>
  </s:Body>
</s:Envelope>

```

The request returns the following information:

XML Sample Response - Retrieve Story

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/rkd/News_1/RetrieveStoryML_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <RetrieveStoryML_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/News_1">
      <StoryMLResponse>
        <Status>
          <StatusMsg>OK</StatusMsg>
          <StatusCode>0</StatusCode>
        </Status>
        <STORYML>
          <HL xmlns="http://schemas.reuters.com/ns/2006/04/14/rmds/webservices/news/headlineml" space="preserve">
            <ID>urn:newsml:reuters.com:20080205:nRNSE3284N:5</ID>
            <RE>5</RE>
            <ST>Usable</ST>
          </HL>
        </STORYML>
      </StoryMLResponse>
    </RetrieveStoryML_Response_1>
  </Body>
</Envelope>

```



<CT>2008-02-05T14:50:39+02:00</CT>
 <RT>2008-02-05T14:50:39+02:00</RT>
 <LT>2008-02-05T14:48:18+02:00</LT>
 <PR>reuters.com</PR>
 <AT>RNS</AT>
 <UR>4</UR>
 <LN>en</LN>
 <HT>REG-BNP Paribas London EPT Disclosure <Origin Href="QuoteRef">BLT.L</Origin></HT>
 <TY>story</TY>
 <PE>439</PE>
 <CO>BLT.L</CO>
 <TO>WEU EUROPE LEN REG GB MET</TO>
 <NI />
 <TN>1</TN>
 <TE><pre>
 </pre><pre>RNS Number:3284N
 BNP Paribas London
 05 February 2008

DEALINGS BY CONNECTED EXEMPT PRINCIPAL TRADERS
 WITHOUT RECOGNISED INTERMEDIARY STATUS, OR WITH RI STATUS
 BUT NOT DEALING IN A CLIENT-SERVING CAPACITY
 (Rule 38.5(b) of the Takeover Code)

1. KEY INFORMATION

Name of exempt principal trader BNP PARIBAS ARBITRAGE SNC
 Company dealt in BHP BILLITON PLC
 Class of relevant security to which the Ordinary Shares
 dealings being disclosed relate (Note 1)

Date of dealing 04 February 2008

2. INTERESTS, SHORT POSITIONS AND RIGHTS TO SUBSCRIBE

(a) Interests and short positions (following dealing) in the class of relevant security dealt in (Note 2)

	Long		Short	
	Number	(%)	Number	(%)
(1) Relevant securities	6,707,236	0.2972		
(2) Derivatives (other than options)				
(3) Options and agreements to purchase/sell				
Total	6,707,236	0.2972		

(b) Interests and short positions in relevant securities of the company, other than the class dealt in (Note 2)

Class of relevant security:	Long		Short	
	Number	(%)	Number	(%)
(1) Relevant securities				
(2) Derivatives (other than options)				
(3) Options and agreements to purchase/sell				
Total				

(c) Rights to subscribe (Note 2)

Class of relevant security: Details</pre><pre>

3. DEALINGS (Note 3)

(a) Purchases and sales

Purchases



8214	16.00
...	
197	16.69
Total	
832864	

Sales	
93	16.04
...	
-1463	16.70
Total	
-983422	

(b) Derivatives transactions (other than options)

Product name, e.g. CFD	Long/short (Note 5)	Number of securities (Note 6)	Price per unit (Note 4)

(c) Options transactions in respect of existing securities

(i) Writing, selling, purchasing or varying

Product name, e.g. call option	Writing, selling, purchasing, varying etc.	Number of securities to which the option relates (Note 6)	Exercise price	Type, e.g. American, European etc.	Expiry date	Option money paid/received per unit (Note 4)

(ii) Exercising

Product name, e.g. call option	Number of securities	Exercise price per unit (Note 4)

(d) Other dealings (including new securities) (Note 3)

Nature of transaction (Note 7)	Details	Price per unit (if applicable) (Note 4)

4. OTHER INFORMATION

Agreements, arrangements or understandings relating to options or derivatives

Full details of any agreement, arrangement or understanding between the person disclosing and any other person relating to the voting rights of any relevant securities under any option referred to on this form or relating to the voting rights or future acquisition or disposal of any relevant securities to which any derivative referred to on this form is referenced. If none, this should be stated.

None

Is a Supplemental Form 38.5(b) attached? (Note 8)
YES/NO

Date of disclosure	05 February 2008

Contact name	Darren Clarke

Telephone number	020 7595 4821

Name of offeree/offor with which connected	BHP Billiton
Nature of connection (Note 9)	Advisor

Notes

The Notes on Form 38.5(b) can be viewed on the Takeover Panel's website at
<Origin Href="Link">www.thetakeoverpanel.org.uk</Origin>

This information is provided by RNS
The company news service from the London Stock Exchange
END




```

        EMMFKPKQBBKDFBK</pre></TE>
        <PD>RNS</PD>
      </HL>
    </STORYML>
  </StoryMLResponse>
</RetrieveStoryML_Response_1>
</Body>
</Envelope>

```

Attribute	Description
Status	Contains an integer StatusCode and a StatusMsg for which values include: "OK", "ACCESS_DENIED", "INVALID_REQUEST".
StoryML	Contains zero or more StoryML-formatted news stories as HL elements.

28.5 Retrieve News (RetrieveNewsML_Request_1)

This operation performs the simple task of retrieving a single news item based on a unique story ID. The data is returned as a NewsML string. The schema for NewsML is available at newsml.org.

This function allows you to retrieve a list of news headlines or an individual news story. Each news story has a Story ID, a unique text identifier that can be used to request that story text.

The StoryRequest structure consists of zero or more StoryID elements and an optional TimeOut (in whole seconds) that specifies how long the application can wait for a response. The StoryID is a full NewsML URN, of the form urn:newsml:[provider id]:[date]:[doc id], e.g., "urn:newsml:reuters.com:20001106:nJIJ6SS016".

Note: The full <StoryId>=urn:newsml:[provider id]:[date]:[newsstoryid]:[digit] where the last digit after the colon states the specific news story version number. So, this urn "urn:newsml:reuters.com:20090617:<newsstoryid>:6" means that the specified story has 6 versions. By default, the most recent version is automatically selected and displayed. Or you can manually request the most recent version by eliminating the last digit after the colon ("6") to display the most recent version of the news story.

The following example retrieve news story for the specified story ID:

XML Sample Request - Retrieve News

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/News/News.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/News_1/RetrieveNewsML_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <RetrieveNewsML_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/News_1">
      <NewsMLRequest>
        <StoryId>urn:newsml:reuters.com:20080205:nPnNETU058:2</StoryId>
      </NewsMLRequest>
    </RetrieveNewsML_Request_1>
  </Body>
</Envelope>

```

Note: To search for news on a specific company using Thomson Reuters News service, you have to specify "class=companies" and the RIC of the company.

The following example searches for news on Yahoo:

XML Sample Request

```
<Filter>
  <MetaDataConstraint class="companies" xmlns="http://schemas.reuters.com/ns/2006/04/14/rmds/webservices/news/filter">
    <Value>YH00.O</Value>
  </MetaDataConstraint>
</Filter>
```

Important! Keep in mind that you can retrieve up to 30 stories at a time. If you specify more than 30 stories (StoryIds), the request will be rejected with the following SOAP fault:

SOAP Fault Reply

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Faults_1/Fault_1_Reply</a:Action>
    <a:RelatesTo>c0e5282bc42543ebac527a73688f0167</a:RelatesTo>
  </s:Header>
  <s:Body>
    <s:Fault>
      <s:Code>
        <s:Value>s:Receiver</s:Value>
        <s:Subcode>
          <s:Value xmlns:a="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Faults_1">a:General_Errors</s:Value>
        </s:Subcode>
      </s:Code>
      <s:Reason>
        <s:Text xml:lang="en-GB">Backend error: 'INVALID_INPUT'</s:Text>
      </s:Reason>
      <s:Detail>
        <ClientErrorReference xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Faults_1" xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
          <Timestamp>2011-05-04T18:43:07.3339927Z</Timestamp>
          <ErrorReference>1ba537869c6341a88ed919a7d03ac5c3</ErrorReference>
          <ServerReference>72EA12F9DE9CF37374C798B03C8A7CC51492C25800DDD626</ServerReference>
        </ClientErrorReference>
      </s:Detail>
    </s:Fault>
  </s:Body>
</s:Envelope>
```

The request returns the following information:

XML Sample Response - Retrieve News

The Story is a string containing the news story in NewsML format.

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/rkd/News_1/RetrieveNewsML_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <RetrieveNewsML_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/News_1">
      <NewsMLResponse>
        <Status>
          <StatusMsg>OK</StatusMsg>
          <StatusCode>0</StatusCode>
        </Status>
        <Story><NewsML><Catalog Href="http://localhost/newsml/catalog-reuters-master_catalog.xml"/>
          <<NewsEnvelope><DateAndTime>20080205T131545-0000</DateAndTime><NewsService FormalName="headline_pes:336"/>
          <><NewsService FormalName="story_pes:336"/><Priority FormalName="4"/></NewsEnvelope><NewsItem xml:space="preserve"><Identification><NewsIdentifier><ProviderId>reuters.com</ProviderId><DateId>20080205</DateId><NewsItemId>nPnNETU058</NewsItemId><RevisionId PreviousRevision="1" Update="N">2</RevisionId><PublicIdentifier>urn:newsml:reuters.com:20080205:nPnNETU058:2</PublicIdentifier></NewsIdentifier><Identification><NewsManagement><NewsItemType FormalName="News"/><FirstCreated>20080205T131806-0000</
```



```

FirstCreated><ThisRevisionCreated>20080205T131806-0000</ThisRevisionCreated><Status FormalName="Usable"/><Urgency
FormalName="4"/></NewsManagement><NewsComponent xml:lang="en" Essential="no" EquivalentsList="no"
Duid="NC00001"><TopicSet FormalName="nds.topics"><Topic Duid="TC_LEN"><TopicType FormalName="Language"/
><FormalName Scheme="N2000"><![CDATA[LEN]]></FormalName><Description xml:lang="en">English</Description></
Topic><Topic Duid="TC_LEI"><TopicType FormalName="Tourism and leisure"/><FormalName Scheme="N2000"><![CDATA
[LEI]]></FormalName><Description xml:lang="en">Leisure facilities</Description></Topic><Topic
Duid="RT_NEWWR"><TopicType FormalName="Reuters_Topic"/><FormalName Scheme="Reuters_Scheme"><![CDATA[NEWWR]]
></FormalName><Description xml:lang="en">Description is not available</Description></Topic></TopicSet><Role
FormalName="MAIN"/><AdministrativeMetadata><Provider><Party FormalName="NDS"/></Provider><Source><Party
FormalName="PRN"/></Source></AdministrativeMetadata><DescriptiveMetadata><Language FormalName="en"/></
DescriptiveMetadata><NewsComponent xml:lang="en" Essential="no" EquivalentsList="no" Duid="NC00002"><Role
FormalName="MAIN TEXT"/><NewsLines><HeadLine>Patron Hits for $160,000 at Mount Airy Casino Resort</HeadLine></
NewsLines><DescriptiveMetadata><Genre FormalName="Immediacy"/><OfInterestTo FormalName="PRN"/><TopicOccurrence
Topic="#TC_LEN"/><TopicOccurrence Topic="#TC_LEI"/><TopicOccurrence Topic="#RT_NEWWR"/></
DescriptiveMetadata><ContentItem Duid="CI00001"><MediaType FormalName="text"/><Format FormalName="XHTML"/
><DataContent><html><head><title></title></head><body><pre>Stroudsburg resident latest winner at Casino Resort, which
has the best odds
in the state

```

PARADISE TOWNSHIP, Pa., Feb. 5 /PRNewswire/ -- Gregg Artzt of Stroudsburg is the latest big winner at Mount Airy Casino Resort, hitting a jackpot for \$160,000 while playing the slot machines on Saturday. Artzt's big win comes on the heels of a \$100,000 winner in December. That patron took home the resort's SuperShot Jackpot.

Since its opening, Mount Airy Casino Resort has maintained the highest payout percentage of any casino in Pennsylvania and is approximately 1.2 percentage points higher than the state average. When applied to Mount Airy's average weekly slot handle since opening, the higher payout percentage results in an extra \$450,000 being paid to patrons per week. Mount Airy has the most favorable odds for patrons in the Commonwealth of Pennsylvania.

The current SuperShot Jackpot, which grows on a continual basis, is more than \$107,000. It is open to all Mount Airy Players Club members and any patron with a Player's Club card inserted in a slot machine is eligible to win, regardless of the type of machine being played or denomination wagered.

Patrons who want to try their luck at Mount Airy Casino Resort can take advantage of special getaway packages for Valentine's Day and President's Day Weekend. Starting at \$150.00 per person (based on double occupancy), each package includes room accommodations in the casino resort's beautifully decorated hotel rooms, featuring pillow top beds, 37" LCD TVs and elegant oversized bathrooms. The package also includes \$50 in dining or retail credits, plus \$25 in free slot play upon joining the Player's Club and complimentary access to Gypsies Nightclub and Lounge. Packages, which are quickly selling out, can be purchased by calling 1-877-MT-AIRY-1.

Mount Airy Casino Resort features a mix of more than 2,500 reel-spinning machines and the newest themed video slots, as well as progressive jackpots. Dining options at the new resort include Red Steakhouse, offering prime steaks and the freshest seafood; Le Sorelle Cucina, offering Italian delicacies; Betty's Diner, featuring All-American dining, open 24 hours a day; and The Buffet at Mount Airy.

Each room and suite in Mount Airy Casino Resort's luxury hotel was designed with the goal of obtaining a four-star rating, making them the highest quality rooms available in the Pocono Mountains. The casino resort's upscale Gypsies Lounge Nightclub, which offers a mix of live bands and other acts, has one of the best sound systems in the Mid-Atlantic region. Later this month, Mount Airy Casino Resort will open its luxury spa and salon, providing guests with a range of invigorating spa treatments, including facials, skin treatments, personalized massages and more.

SOURCE Mount Airy Casino Resort

Pete Peterson of Bellevue Communications Group, +1-215-893-4297 (o), +1-215-990-8928 (cell), for Mount Airy Casino Resort</pre></body></html></DataContent></ContentItem></NewsComponent></NewsItem></NewsML>

```

</Story>
</NewsMLResponse>
</RetrieveNewsML_Response_1>

```

```

</Body>
</Envelope>

```

Attribute	Description
Status	Contains an integer StatusCode and a StatusMsg for which values include: "OK", "ACCESS_DENIED", "INVALID_REQUEST".
Story	A string that contains the news story in NewsML format.



28.6 Get News Topics (GetTopics_Request_1)

The following example shows how to retrieve news topics.

XML Sample Request - Get News Topics

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/News/News.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/News_1/
    GetNewsTopics_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetNewsTopics_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/News_1" />
  </Body>
</Envelope>
```

Note: News topics are updated on nightly basis.

XML Sample Response - Get News Topics

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/
    rkd/News_1/GetNewsTopics_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <GetNewsTopics_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/News_1">
      <topics>
        <group>
          <topic code="AD">
            <Description Variant="Short" lang="en">Andorra</Description>
            <Description Variant="Long" lang="en">Principality of Andorra</Description>
            <Description Variant="IsoShort" lang="en">ANDORRA</Description>
            <Description Variant="IsoLong" lang="en">Principality of Andorra</Description>
            <Description Variant="Adjectival" lang="en">Andorran</Description>
          </topic>
          ...
          <topic code="ZW">
            <Description Variant="Short" lang="en">Zimbabwe</Description>
            <Description Variant="Long" lang="en">Republic of Zimbabwe</Description>
            <Description Variant="IsoShort" lang="en">ZIMBABWE</Description>
            <Description Variant="IsoLong" lang="en">Republic of Zimbabwe</Description>
            <Description Variant="Alternate" lang="en">Southern Rhodesia</Description>
            <Description Variant="Alternate" lang="en">Rhodesia</Description>
            <Description Variant="Adjectival" lang="en">Zimbabwean</Description>
          </topic>
        </group>
        <group>
          <topic code="DIARY">
            <Description Variant="Short" lang="en">Diary</Description>
            <Description Variant="Long" lang="en">The object contains scheduled events, such as conventions, summits, etc.</
            Description>
          </topic>
          ...
        </group>
        <group>
          ...
          <topic code="RAW">
            <description Variant="Short" lang="en">Basic Materials</description>
            <description Variant="Long" lang="en">Companies engaged in the extraction and primary refinement of chemicals, metals,
            non-metallic and construction materials, forest, wood and paper products and containers and packaging products.</
          </topic>
        </group>
      </topics>
    </GetNewsTopics_Response_1>
  </Body>
</Envelope>
```



```

        description>
        <description Variant="Detailed" lang="en">The Basic Materials economic sector consists of companies engaged in the
        extraction and primary refinement of chemicals, metals, non-metallic and construction materials, forest, wood and paper
        products and containers and packaging products.</description>
        </topic>
        ...
    </group>
</group>
<group>
    ...
    <topic code="ZAR/POLL">
        <Description Variant="Short" lang="en">South African rand FX outlook poll</Description>
    </topic>
</group>
</topics>
</GetNewsTopics_Response_1>
</Body>
</Envelope>

```

28.7 Get Reuters Top News By Column (GetReutersTopNewsByColumn_1)

The GetReutersTopNewsByColumn_1 operation provides the ability to search and retrieve headlines and stories only for specific Top News Columns, such as

- Front Page
- Wealth Management
- On the Move
- Your Practice
- They Said What
- Comply
- Market Pulse-Stocks
- Market Pulse-Research
- Hot Stocks
- How to Play It
- Muni World
- Allocations
- Fundamentals
- Saft on Wealth
- The Lipper List
- Your Client

For the Front Page and Wealth Management columns you can also get image URLs (to retrieve images) and StoryIDs (to retrieve a news story using RetrieveStoryML_Request_1).

The following example shows how to retrieve headlines and stories for **Front Page** Top News:

XML Sample Request - Get Reuters Top News By Column - Front Page

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/News/News.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/News_1/
    GetReutersTopNewsByColumn_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetReutersTopNewsByColumn_Request_1 xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/
    XMLSchema-instance" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/News_1">
      <NewsColumn>Front Page</NewsColumn>
    </GetReutersTopNewsByColumn_Request_1>
  </Body>
</Envelope>

```



```
</Body>
</Envelope>
```

The response returns the following information:

XML Sample Response - Get Reuters Top News By Column - Front Page

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/
      rkd/News_1/GetReutersTopNewsByColumn_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <GetReutersTopNewsByColumn_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/News_1">
      <Story>
        <StoryProps xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/News_1/response">
          <ItemMeta>
            <Provider>NOT AVAILABLE</Provider>
            <BodyType>text/xml</BodyType>
            <Source>RTE</Source>
            <VersionCreated>2012-07-24T09:09:06.000+00:00</VersionCreated>
            <FirstCreated>2012-07-24T09:09:06.000+00:00</FirstCreated>
          </ItemMeta>
          <ContentMeta>
            <Urgency>4</Urgency>
            <Language>L:en</Language>
            <HeadlineText d7p1:language="L:en" d7p1:displayDirection="LeftToRight" xmlns:d7p1="http://www.reuters.com/
              ns/2006/05/01/webservices/rkd/News_1/response">Front Page - urn:newsml:reuters.com:20020923:
              SPDOC_119827232002:295429</HeadlineText>
            <TakeNo>1</TakeNo>
            <RCS></RCS>
            <Products>TPN</Products>
            <RRR>RR:133 RR:134 </RRR>
          </ContentMeta>
          <DisplayDirection>LeftToRight</DisplayDirection>
        </StoryProps>
        <OtherContent xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/News_1/response">
          ...
        </OtherContent>
      </Story>
    </GetReutersTopNewsByColumn_Response_1>
  </Body>
</Envelope>
```

The following example shows how to retrieve headlines and stories for **On the Move** Top News:

XML Sample Request - Get Reuters Top News By Column - On the Move

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/News/News.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/News_1/
      GetReutersTopNewsByColumn_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetReutersTopNewsByColumn_Request_1 xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/
      XMLSchema-instance" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/News_1">
      <NewsColumn>On the Move</NewsColumn>
    </GetReutersTopNewsByColumn_Request_1>
  </Body>
</Envelope>
```



The response returns the following information:

XML Sample Response - Get Reuters Top News By Column - On the Move

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/
rkd/News_1/GetReutersTopNewsByColumn_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <ns0:GetReutersTopNewsByColumn_Response_1 xmlns:ns0="http://www.reuters.com/ns/2006/05/01/webservices/rkd/News_1"
xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/News_1">
      <ns0:HeadlineMLResponse>
        <ns0:Status>
          <ns0:StatusMsg>OK</ns0:StatusMsg>
          <ns0:StatusCode>0</ns0:StatusCode>
        </ns0:Status>
        <ns0:Context>
          <ns0:Newer>2012-05-16T20:19:42+00:00</ns0:Newer>
          <ns0:Older>2012-03-26T21:36:37+00:00</ns0:Older>
        </ns0:Context>
        <ns0:HEADLINEML xmlns:ns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/News_1" xmlns="http://schemas.reuters.
com/ns/2006/04/14/rmds/webservices/news/headlineml">
          <HL space="preserve">
            <ID>urn:newsml:reuters.com:20120516:nL1E8GGB42:4</ID>
            <RE>4</RE>
            <ST>Usable</ST>
            <CT>2012-05-16T20:19:42-00:00</CT>
            <RT>2012-05-16T20:19:42-00:00</RT>
            <LT>2012-05-16T22:59:48-00:00</LT>
            <PR>reuters.com</PR>
            <AT>RTRS</AT>
            <UR>4</UR>
            <LN>en</LN>
            <HT>ON THE MOVE-Benjamin Edwards hires Wells Fargo adviser</HT>
            <TY>story</TY>
            <PE>511 301 347 376 394 408 416 433 452 458</PE>
            <CO>WFC.N</CO>
            <TN>1</TN>
          </HL>
          ...
        </ns0:HEADLINEML>
      </ns0:HeadlineMLResponse>
    </ns0:GetReutersTopNewsByColumn_Response_1>
  </Body>
</Envelope>
```

The response returns the following data, depending on the selected Top News column.

Attribute	Description
ItemMeta	Contains the following values: - Provider - party responsible for the management of the item - BodyType - news story body type - Source - news source or attribution - VersionCreated - date and time when the current version of the item was created - FirstCreated - date and time when the first version of the item was created - Embargoed - date and time when the item was embargoed. If absent, then the item was not embargoed. - PubStatus - publication status of the item. The default is Usable.
ContentMeta	Has the following attributes: - Urgency - news content urgency (1- bulletin, 2 - alert, 3 - news break, 4 - normal, 5 - feature, 6-9 are spare) - Language - language code as defined in RFC 1766, Tags for the Identification of Languages. If possible, it will be 2-letter codes described in ISO 639. If content is multi-language, each language will be present here. - HeadlineText - contains the headline text, language and display direction



	• TakeNo - take sequence number • Slugline - a sequence of sluglines associated with the content • Snippet - a small piece of a story taken from the leading paragraph • Byline - author of the news item • ContentCreated - date (and optionally the time) when the content was created • ContentModified - date (and optionally the time) when the content was last modified • OrgIDs - list of organizations (OrgIDs), space delimited • RCS - list of RCS codes, space delimited • Products - list of products that have access to the news item, space delimited • RRR - list of RRR codes, space delimited
TakeHistory	Contains a list of Take Headline and attribute information: • language - Language code • displayDirection - LeftToRight, RightToLeft • action - Contains the processing rules for this TakeHeadline • time - The (optional) Date and Time associated with the Take • seqNo - The Take sequence number.
Related	Contains a list of related headlines and attribute information: • language - Language code • displayDirection - LeftToRight, RightToLeft • PNAC - The Primary News Access Code used to retrieve the full story in a Story request. • pnacDate - The (optional) Date and Time that the story was created.
DisplayDirection	The DisplayDirection of the story: LeftToRight, RightToLeft.
TextContent	Text story content.
OtherContent	Any other content, depending on the selected column. Contains NewsComponents that may include the following elements: • Role - Related Content, Related Video, Main Picture, Image Wrapper, News Event Package, etc. • Headline - the news headline. • SP_BreakingNews - shows if the news is a normal story or Breaking news. Possible values are 0 and 1. • DateLine - date and place of writing the news. • USN - StoryId. You can use this StoryId in RetrieveStoryML_Request_1 to retrieve a news story. • ContentCreationDateAndTime - date and time when the content was created. • ContentItem contains: - o HRef - URL to retrieve an image. - o MediaType - Photo, Text, etc. - o Format - JPEG Baseline, XHTML, etc. - o PicType - ViewImage, Thumbnail, etc. - o Body - the news text.
Status	Contains an integer StatusCode and a StatusMsg for which values include: "OK", "ACCESS_DENIED", "INVALID_REQUEST".
Context	Contains two values - Newer and Older - that provide the revision times of the oldest and newest headlines returned.
HEADLINEML	Contains zero or more HL elements representing Headlines. For details on possible values see Understanding Retrieve Headlines Response.

28.8 Classes for Metadata Search on News

The simplest approach is to use "all" as the MetaDataConstraint. However, you may find that performance is improved by specifying a MetaDataConstraint. The possible values for this are:

- **all**
- **companies**
- **topics**
- **product**
- **attribution**
- **language**
- **nameditem**

Please see related articles:



How to see how a specific news stories has been categorized?
 What values can I use in order to filter on News?
 How does the companies news metadata constraint work?
 How does the topics news metadata constraint work?
 How does the products news metadata constraint work?
 How does the attribution news metadata constraint work?
 What is a named item?

28.8.1 How to See how a Specific News Stories has been Categorized?

It is possible to see the values for these metadata constraints on the stories which are returned by TRKD in the RetrieveStoryML_1 method:

- CO element contains the value for companies referred to in the story
- TO element contains the value for the topic codes assigned to the story
- PD element contains the value for products assigned to the story
- AT element contains the value for attribution
- LN element contains the value for the language the story is written in
- NI element contains the value for named items assigned to the story

In addition, the TO element and LN elements are available in the RetrieveHeadlineML_1 method.

The metadata on each story can be used to retrieve related headlines, by requesting the RetrieveHeadlineML_1 method for the appropriate metadata class and value.

28.8.2 What Values Can I Use in Order to Filter on News?

There are various sources for the values for the news metadata:

1. The TRKD Data Guide contains information on metadata filters which are appropriate for each of the news packages.
2. Each story contains information about how the story has been categorized. This can be used to search on related articles.
3. The GetNewsTopics_1 method retrieves possible values which can be used as news topics, together with a detailed description.

28.8.3 How Does the Companies News Metadata Constraint Work?

When stories are filed, the journalist tags stories with RICs (Reuters Instrument Codes) for each of the companies which are mentioned in the article (news on Microsoft is always tagged MSFT.O, for example).

When you make a request against the RetrieveHeadlineML_1 method and specify companies as the metadata constraint, TRKD looks up for the RIC and retrieves news for the company. This means if you request MSFT.O, news will be returned for Microsoft.

28.8.4 How Does the Topics News Metadata Constraint Work?

When stories are filed, journalists specify what the topics for the stories are. In addition topics are added to stories automatically based on their content. Each story frequently has many different topic codes. For example, a story whose headline is "MSN unveils a wall of entertainment news" might have the following topic codes:

- **TECH** - Technology
- **DPUB** - Media Diversified
- **MDIA** - Media
- **SOFW** - Software
- **DPR** - Computers / Office Equipment
- **CYCS** - Cyclical Consumer Goods / Services
- **CCOS** - Cyclical Consumer Services
- **PUB** - Media / Publishing
- **LEN** - English Language
- **US** - United States



- **SWIT** - Software / IT Services
- **RTRS** - Reuters
- **LEI** - Leisure
- **ENT** - Entertainment

Topic codes typically include information on the industry sectors and the countries referred to in the story as well as what might more normally be thought of as topics.

28.8.5 How Does the Products News Metadata Constraint Work?

The products metadata constraint describes what internal Thomson Reuters News product the particular story has been assigned to. It is of limited use to TRKD users.

28.8.6 How Does the Attribution News Metadata Constraint Work?

Attribution describes what organization the story is attributed to. Most stories on TRKD are attributed to Thomson Reuters and the attribution is RTRS. However, selected third parties are also available on TRKD, and stories attributed to third parties can be filtered on using the attribution metadata constraint.

28.8.7 What is a Named Item?

Most news available via TRKD is in response to events. However, there are some stories which are regular reports which give a summary of events since the last report - for example the US Market Summary report. Such reports are typically assigned a value for the named item metadata constraint.

28.9 Origin Tags

The origin tags (Href values) in a story are items that can be made "clickable" if required. For example, the <Origin Href="Link"> tags contain URLs and the <Origin Href="QuoteRef"> tags contain RICs.

Unfortunately, TRKD API request does not provide means to remove these origin tags in case when you want to remove them on your custom API and don't want them to be used. The table below show more examples of origin tags:

Href Value	Description
StoryRef	Related story ID.
QuoteRef	Contains RIC of the instrument related to the story.
NewsSearch	Contains value, that can be used as metadata constraint in get headlines method (class=any) to get related headlines.
NewsSearchID	Related story ID short form. In order to use it, a client will have to transform into full ID form: ▪ Short form example: ID:nWEB7358 ▪ Full form example: urn:newsmil:reuters.com:*:nWEB7358
Link	A link (URL) to external resource.

28.10 Special Characters in Thomson Reuters News

When news headline/text contains xml special characters (") Request Builder displays them as escaped on Design view.

NDSNewsService responses have special characters (&, ", <, > etc.) which are escaped twice. For example "&quot;" value in the response context is erroneous and should be """.

To solve this issue it is necessary to decode the response once.

For example, in C#:

```
string decoded_value = HttpUtility.HtmlDecode("&amp;quot;");
result in xml: &quot;
result in html: "
```



28.11 Getting Alerts

To retrieve only alerts, the user must submit the following request:

XML Sample Request - Retrieving Only Alerts

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/News/News.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/News_1/
RetrieveHeadlineML_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <RetrieveHeadlineML_Request_1 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/
XMLSchema" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/News_1">
      <HeadlineMLRequest>
        <Filter>
          <MetaDataConstraint class="alert" xmlns="http://schemas.reuters.com/ns/2006/04/14/rmds/webservices/news/filter">
            <Value>1</Value>
          </MetaDataConstraint>
        </Filter>
      </HeadlineMLRequest>
    </RetrieveHeadlineML_Request_1>
  </Body>
</Envelope>
```

28.12 Getting Alerts in Japanese

In order to get alerts in Japanese the user must have 'RKD API New Japan Alerts' MXPDB right. This right allows the user to receive alerts in Japanese using the News service.

To retrieve only alerts in Japanese, the user must submit the following request:

XML Sample Request - Retrieving Japanese Alerts

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/News/News.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/News_1/
RetrieveHeadlineML_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <RetrieveHeadlineML_Request_1 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/
XMLSchema" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/News_1">
      <HeadlineMLRequest>
        <Filter>
          <MetaDataConstraint class="alert" xmlns="http://schemas.reuters.com/ns/2006/04/14/rmds/webservices/news/filter">
            <Value>1</Value>
          </MetaDataConstraint>
        </Filter>
        <Filter>
          <MetaDataConstraint class="language" xmlns="http://schemas.reuters.com/ns/2006/04/14/rmds/webservices/news/filter">
            <Value>ja</Value>
          </MetaDataConstraint>
        </Filter>
      </HeadlineMLRequest>
    </RetrieveHeadlineML_Request_1>
  </Body>
</Envelope>
```



```
</Filter>
</HeadlineMLRequest>
</RetrieveHeadlineML_Request_1>

</Body>
</Envelope>
```



chapter 29 Online Reports

Our Online Reports service provides access to the ten most relevant news stories for a given topic and country, and differs from our other news services in some key ways:

- In addition to text, Online reports includes photos for many of its stories.
- It provides a snapshot of the ten most relevant stories for each topic.
- Our news editors pick the most relevant stories and curate the list of ten throughout the day.
- Because there is no history to search through and filter, Online Reports is relevant and ready-to-use for immediate publishing without the need for further processing.

Note: Online Reports and corresponding photos can be retrieved only for the last 10 days.

29.1 Authentication/Authorization, Service Endpoint, and Required Headers

Authorization

All requests to the Online Reports web service require an authorization token. For details, see section Understanding Authentication Tokens.

Authentication

Thomson Reuters Online Reports uses Reuters impersonation tokens for each effective user. In this case, Thomson Reuters must create each user before your application authenticates them. Unmanaged effective users are not supported in Thomson Reuters Online Reports.

For additional information on creating a Service Token, see section Creating a Token.

Service Endpoint

Online Reports Endpoint

<http://api.rkd.reuters.com/api/OnlineReports/OnlineReports.svc>

Required Header

Required HTTP Headers

POST api/OnlineReports/OnlineReports.svc HTTP/1.1
 Content-Type: application/soap+xml
 Host: api.rkd.reuters.com
 Content-Length: [length]

29.2 WSDL

WSDL:

http://api.rkd.reuters.com/schemas/OnlineReports/wsd/OnlineReports_1_HttpAndRKDToken.wsdl

29.3 Get Summary by Topic (GetSummaryByTopic_1)

The following example shows how to retrieve summary by OLCABUS_US topic. See section Get Topics (GetTopics_Request_1) to know how to retrieve a topic.

XML Sample Request - Get Summary by Topic

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/OnlineReports/OnlineReports.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/OnlineReports_1/GetSummaryByTopic_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[ApplID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetSummaryByTopic_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/OnlineReports_1" />
    <Topic>OLCABUS_US</Topic>
    <MaxCount>2</MaxCount>
    </GetSummaryByTopic_Request_1>
  </Body>
</Envelope>

```

Important! Keep in mind that you MaxCount value can NOT exceed 30. If you specify a value greater than 30, the request will be rejected with the following SOAP fault:

SOAP Fault Reply

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Faults_1/Fault_1_Reply</a:Action>
    <a:RelatesTo>c0e5282bc42543ebac527a73688f0167</a:RelatesTo>
  </s:Header>
  <s:Body>
    <s:Fault>
      <s:Code>
        <s:Value>s:Receiver</s:Value>
        <s:Subcode>
          <s:Value xmlns:a="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Faults_1">a:General_Errors</s:Value>
        </s:Subcode>
      </s:Code>
      <s:Reason>
        <s:Text xml:lang="en-GB">Backend error: 'INVALID_INPUT'</s:Text>
      </s:Reason>
      <s:Detail>
        <ClientErrorReference xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Faults_1" xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
          <Timestamp>2011-05-04T18:43:07.3339927Z</Timestamp>
          <ErrorReference>1ba537869c6341a88ed919a7d03ac5c3</ErrorReference>
          <ServerReference>72EA12F9DE9CF37374C798B03C8A7CC51492C25800DDD626</ServerReference>
        </ClientErrorReference>
      </s:Detail>
    </s:Fault>
  </s:Body>
</s:Envelope>

```

The response returns the following data:

XML Sample Response - Get Summary by Topic

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/rkd/OnlineReports_1/GetSummaryByTopic_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <GetSummaryByTopic_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/OnlineReports_1">
      <StoryMLResponse xmlns="http://schemas.reuters.com/ns/2006/04/14/rmds/webservices/NDSNewsService_1/types">

```



```

<Status>
  <StatusMsg>OK</StatusMsg>
  <StatusCode>0</StatusCode>
</Status>
<STORYML />
<HL xmlns="http://schemas.reuters.com/ns/2006/04/14/rmds/webservices/news/headlineml" space="preserve">
  <ID>urn:newsml:online:report.com:20080731:nOLCABUS:4</ID>
  <RE>4</RE>
  <ST>Usable</ST>
  <CT>2008-07-31T02:42:02-05:00</CT>
  <RT>2008-07-31T02:42:02-05:00</RT>
  <LT>2008-07-31T02:42:32-05:00</LT>
  <PR>online:report.com</PR>
  <AT>IDS</AT>
  <UR>4</UR>
  <LN>en</LN>
  <HT>Reuters Canada Online Report Business News</HT>
  <TY>story</TY>
  <PE>99999 10100 10101</PE>
  <STORY_PE>99999 10100 10101</STORY_PE>
  <CO />
  <TO>OCABS RTRSY OLCABUS OLRLNK OLCABUS_US OLCABUS_SPO RTR.L LINK</TO>
  <NI />
  <TN>1</TN>
  <TE>
  <p>
    <Origin Href="StoryRef">urn:newsml:online:report.com:20080730:nMTFH4667820080730212843N28409392</
    Origin>Toronto stocks soar on energy and miners<p> TORONTO (Reuters) - The Toronto Stock Exchange's main index
    jumped more than 2 percent on Wednesday, spurred by resource issues, especially the energy sector, which rallied along with
    oil prices.</p><Origin Href="ThumbnailRef">2008-07-30T144816Z_01_NOOTR_RTRIDSP_1_BUSINESS-MARKETS-
    CANADA-STOCKS-COL.jpg</Origin><Origin Href="ImageRef">urn:newsml:online:report.com:20080730:
    nMTFH3764420080730144816NOOTR</Origin><Origin Href="ImageTitle">Toronto Stock Exchange logo is seen in
    Toronto</Origin><Origin Href="StoryCreationDate">20080730T212843+0000</Origin><Origin
    Href="ImageCreationDate">20080730T144816+0000</Origin>
  </p>
  ...

  <p>
    <Origin Href="StoryRef">urn:newsml:online:report.com:20080730:nMTFH4627720080730210505WNA5092</
    Origin>MDA's profit dented by blocked asset sale<p> TORONTO (Reuters) - Data-processing and space technology
    company MacDonald, Dettwiler and Associates Ltd &lt;MDA.TO> reported a drop in quarterly profit on Wednesday, as costs
    related to the blocked sale of one of its units ate into results.</p><Origin Href="StoryCreationDate">20080730T210505
    +0000</Origin>
  </p>
  <p>
    <Origin Href="StoryRef">urn:newsml:online:report.com:20080730:nMTFH4134820080730172210N30294927</
    Origin>TMX Group profit up on Montreal contribution<p> TORONTO (Reuters) - Canadian exchange operator TMX Group Inc &lt;
    X.TO> said on Wednesday its second-quarter profit rose 26 percent as the May 1 acquisition of the Montreal Exchange
    derivatives operation helped to boost its bottom line.</p><Origin Href="StoryCreationDate">20080730T172210+0000</Origin>
  </p>
  </TE>
  <PD />
  <SR>
    <Origin Type="StoryRef">urn:newsml:online:report.com:20080730:nMTFH4667820080730212843N28409392</Origin>
    <Origin Type="ThumbnailRef">http://STLD-RKWAPIAB/api/online:reports/2008-07-
    30T144816Z_01_NOOTR_RTRIDSP_1_BUSINESS-MARKETS-CANADA-STOCKS-COL.jpg.ashx</Origin>
    <Origin Type="ImageRef">urn:newsml:online:report.com:20080730:nMTFH3764420080730144816NOOTR</Origin>
  ...

  <Origin Type="StoryCreationDate">20080730T172210+0000</Origin>
  </SR>
  </HL>
<HL xmlns="http://schemas.reuters.com/ns/2006/04/14/rmds/webservices/news/headlineml" space="preserve">
  <ID>urn:newsml:online:report.com:20080731:nMTFH5644020080731074151T140485:1</ID>
  <RE>1</RE>
  <ST>Usable</ST>
  <CT>2008-07-31T02:41:51-05:00</CT>
  <RT>2008-07-31T02:41:51-05:00</RT>
  <LT>2008-07-31T02:42:32-05:00</LT>
  <PR>online:report.com</PR>
  <AT>IDS</AT>
  <UR>4</UR>
  <LN>en</LN>

```



```

<HT>Oil steady after gain from U.S. gasoline stock fall</HT>
<TY>story</TY>
<PE>99999 10100 10102</PE>
<STORY_PE>99999 10100 10102</STORY_PE>
<CO />
<TO>OLRTEXT OCABS RTRSY OLCABUS OLCABUS_US OLCABUS_SPO RTR.L TEXT</TO>
<NI />
<TN>1</TN>
<TE>
  <p> By James Topham</p>
  <p> TOKYO (Reuters) - Oil prices steadied on Thursday, after U.S. government data on Wednesday showed an
  unexpected drop in gasoline stocks as suppliers facing weak consumer demand cut production and imports, sending prices
  surging more than $4.</p>
  <p> The rebound on Wednesday came after oil prices pulled back sharply since hitting an all-time peak above $147 on
  July 11, on concerns over falling demand, especially in the United States, the world's largest oil consumer.</p>

  ...

  <p> A bill aimed at preventing excessive speculation in oil and other futures trading did not get enough votes to pass in
  the U.S. House of Representatives on Wednesday, as Republicans complained the measure did not also open more offshore
  areas to oil drilling.</p>
  <p> (Editing by Ramthan Hussain)</p>
  <Origin Href="ThumbnailRef">2008-07-30T202501Z_01_NOOTR_RTRIDSP_1_BUSINESS-MARKETS-OIL-COL.jpg</
  Origin>
  <Origin Href="ImageRef">urn:newsml:online:report.com:20080730:nMTFH4530820080730202501NOOTR</Origin>
  <Origin Href="ImageTitle">New York City cab driver</Origin>
  <Origin Href="ChannelCode">OLCABUS</Origin>
  <Origin Href="LinkTitle">Reuters Canada Online Report Business News</Origin>
  <Origin Href="StoryCreationDate">20080731T074151+0000</Origin>
  <Origin Href="ImageCreationDate">20080730T202501+0000</Origin>
</TE>
<PD />
<SR>
  <Origin Type="ThumbnailRef">http://STLD-RKWAPIAB/api/online:reports/2008-07-
  30T202501Z_01_NOOTR_RTRIDSP_1_BUSINESS-MARKETS-OIL-COL.jpg.ashx</Origin>
  <Origin Type="ImageRef">urn:newsml:online:report.com:20080730:nMTFH4530820080730202501NOOTR</Origin>
  <Origin Type="ImageTitle">New York City cab driver</Origin>
  <Origin Type="ChannelCode">OLCABUS</Origin>
  <Origin Type="LinkTitle">Reuters Canada Online Report Business News</Origin>
  <Origin Type="StoryCreationDate">20080731T074151+0000</Origin>
  <Origin Type="ImageCreationDate">20080730T202501+0000</Origin>
</SR>
</HL>
</STORYML>
</StoryMLResponse>
</GetSummaryByTopic_Response_1>
</Body>
</Envelope>

```

29.4 Get Summary by Stories (GetSummaryByStories_1)

The following example shows how to retrieve summary of a story by Online Reports StoryID.

XML Sample Request - Get Summary by Stories

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/OnlineReports/OnlineReports.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/OnlineReports_1/
    GetSummaryByStories_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetSummaryByStories_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/OnlineReports_1">
      <StoryID>urn:newsml:online:report.com:20070726:nMTFH7653620070726204707NOOTR:1</StoryID>
    </GetSummaryByStories_Request_1>
  </Body>
</Envelope>

```




```
</Body>
</Envelope>
```

Important! Keep in mind that you can retrieve up to 30 stories at a time. If you specify more than 30 stories (StoryIds), the request will be rejected with the following SOAP fault:

SOAP Fault Reply

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Faults_1/Fault_1_Reply</a:Action>
    <a:RelatesTo>c0e5282bc42543ebac527a73688f0167</a:RelatesTo>
  </s:Header>
  <s:Body>
    <s:Fault>
      <s:Code>
        <s:Value>s:Receiver</s:Value>
        <s:Subcode>
          <s:Value xmlns:a="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Faults_1">a:General_Errors</s:Value>
        </s:Subcode>
      </s:Code>
      <s:Reason>
        <s:Text xml:lang="en-GB">Backend error: 'INVALID_INPUT'</s:Text>
      </s:Reason>
      <s:Detail>
        <ClientErrorReference xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Faults_1" xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
          <Timestamp>2011-05-04T18:43:07.3339927Z</Timestamp>
          <ErrorReference>1ba537869c6341a88ed919a7d03ac5c3</ErrorReference>
          <ServerReference>72EA12F9DE9CF37374C798B03C8A7CC51492C25800DDD626</ServerReference>
        </ClientErrorReference>
      </s:Detail>
    </s:Fault>
  </s:Body>
</s:Envelope>
```

The request returns the following information:

XML Sample Response - Get Summary by Stories

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/rkd/OnlineReports_1/GetSummaryByStories_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <GetSummaryByStories_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/OnlineReports_1">
      <StoryMLResponse xmlns="http://schemas.reuters.com/ns/2006/04/14/rmds/webservices/NDSNewsService_1/types">
        <Status>
          <StatusMsg>OK</StatusMsg>
          <StatusCode>0</StatusCode>
        </Status>
        <STORYML>
          <HL xmlns="http://schemas.reuters.com/ns/2006/04/14/rmds/webservices/news/headlineml" space="preserve">
            <ID>urn:newsml:online:report.com:20070726:nMTFH7653620070726204707NOOTR:1</ID>
            <RE>1</RE>
            <ST>Usable</ST>
            <CT>2007-07-26T20:47:07-00:00</CT>
            <RT>2007-07-26T20:47:07-00:00</RT>
            <LT>2007-08-14T10:34:16-00:00</LT>
            <PR>online:report.com</PR>
            <AT>IDS</AT>
            <UR>4</UR>
            <LN>en</LN>
            <HT>CEO of HSBC Finance Corporation Brendan McDonagh listens to questions during the Senate Banking, Housing and Urban Affairs Committee on the mortgage market turmoil on Capitol Hill in Washington</HT>
            <TY>story</TY>
            <PE>99999 10260 10263</PE>
          </HL>
        </STORYML>
      </StoryMLResponse>
    </GetSummaryByStories_Response_1>
  </Body>
</Envelope>
```



Note: Url of Online Report picture is contained in the "Origin" tag, for example:

```
<SR>  
<Origin Type="ViewRef">http://api.rkd.reuters.com/api/onlineereports/2007-07-26T204707Z_01_NOOTR_RTRIDSP_2_OUKBS-UK-USA-SUBPRIME-  
HSBC.jpg.ashx  
</Origin>  
</SR>
```

Please note that method `GetHeadlines_1` is deemed deprecated, so we strongly recommend avoid using `GetHeadlines_1` in any situation. Always use `GetHeadlines_2` instead.

The following example retrieves headlines for `OLCABUS US` topic.

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/OnlineReports/OnlineReports.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/OnlineReports_1/GetHeadlines_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetHeadlines__Request_2 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/OnlineReports_1" Topic="OLGBTOPNEWS"/>
  </Body>
</Envelope>
```



The response returns the following information:

XML Sample Response - Get Headlines 2

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/rkd/OnlineReports_1/GetHeadlines_2_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <GetHeadlines_Response_2 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/OnlineReports_1">
      <Story ID="urn:newsml:online:report.com:20110214:nMAE71D0K820110214125010">
        <HL>
          <T>La policia egipcia marcha por Tahrir en apoyo a la revolucion</T>
          <T>EL CAIRO (Reuters) - Cientos de policias en uniforme y vestidos de civil marcharon el lunes por la plaza de Tahrir en El Cairo en solidaridad con los manifestantes que derrocaron al presidente Hosni Mubarak.</T>
        </HL>
        <Thumbnail>2011-02-14T131004Z_01_AMAE71D10KT00_RTROPTP_1_OESTP-EGIPTO-POLICIA.JPG</Thumbnail>
        <StoryDate>20110214T125010+0000</StoryDate>
        <Img>
          <Ref>urn:newsml:online:report.com:20110214:nMAE71D10KT0020110214131004</Ref>
          <Title>La policia egipcia marcha por Tahrir en apoyo a la revolucion</Title>
          <Date>20110214T131004+0000</Date>
        </Img>
      </Story>
      ....
      <Story ID="urn:newsml:online:report.com:20110214:nMAE71D03320110214063642">
        <HL>
          <T>La banda canadiense Arcade Fire, Grammy al mejor disco del ano</T>
          <T>LOS ANGELES (Reuters) - En una sorpresiva victoria en la entrega de los premios Grammy, la banda canadiense Arcade Fire se llevo el codiciado galardón a mejor disco del ano, desplazando al rapero Eminem en una categoria en la que era visto como favorito.</T>
        </HL>
        <Thumbnail>2011-02-14T071022Z_01_AMAE71D0JXB00_RTROPTP_1_OESTP-MUSICA-PREMIOGRAMMY.JPG</Thumbnail>
        <StoryDate>20110214T063642+0000</StoryDate>
        <Img>
          <Ref>urn:newsml:online:report.com:20110214:nMAE71D0JXB0020110214071022</Ref>
          <Title>La banda canadiense Arcade Fire, Grammy al mejor disco del ano</Title>
          <Date>20110214T071022+0000</Date>
        </Img>
      </Story>
    </GetHeadlines_Response_2>
  </Body>
</Envelope>
```

29.6 Get Topics (GetTopics_Request_2)

The following example shows how to retrieve all Online Reports topics.

XML Sample Request - Get Topics

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/OnlineReports/OnlineReports.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/OnlineReports_1/GetTopics_2</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetTopics_Request_2 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/OnlineReports_1" />
  </Body>
```



```
</Envelope>
```

Note: The GetTopics_Request_2 supports multiple languages; Japanese and Chinese translations are currently available. Keep in mind that language parameter is no longer case sensitive.

XML Sample Response - Get Topics

```
<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" s:mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/rkd/OnlineReports_1/GetTopics_1_Reply</a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetTopics_Response_2 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/OnlineReports_1">
      <Region name="UK Online Report">
        <topic code="OLGBTOPNEWS" desc="Top News"></topic>
        <topic code="OLGBWORLD" desc="World"></topic>
        <topic code="OLGBBUS" desc="Business"></topic>
        <topic code="OLGBENT" desc="Entertainment"></topic>
        <topic code="OLGBSPORT" desc="Sports"></topic>
        <topic code="OLGBINT" desc="UK Internet Report"></topic>
        <topic code="OLGBODD" desc="UK Oddly Enough Report"></topic>
      </Region>
      ...
      <Region name="Brazil Online Report">
        <topic code="OLBRBUS" desc="Business"></topic>
        <topic code="OLBRTOPNEWS" desc="Top News"></topic>
        <topic code="OLBRENT" desc="Entertainment"></topic>
        <topic code="OLBRSPORT" desc="Sports"></topic>
        <topic code="OLBRWORLD" desc="World"></topic>
        <topic code="OLBRINT" desc="Brazil Technology/ Internet Online Report"></topic>
      </Region>
      <Region name="Latam Online Report">
        <topic code="OLLTTOPNEWS" desc="Top News"></topic>
        <topic code="OLLTBUS" desc="Business"></topic>
        <topic code="OLLTSPORT" desc="Sports"></topic>
        <topic code="OLLTENT" desc="Entertainment"></topic>
        <topic code="OLLTCOUNTRY" desc="Latam Country News "></topic>
        <topic code="OLLTWORLD" desc="Latam US and World News "></topic>
        <topic code="OLLTINT" desc="Latam Internet Report"></topic>
      </Region>
    </GetTopics_Response_2>
  </s:Body>
</Envelope>
```

29.7 Retrieving Images Associated with Online Reports

All online reports images can be accessed at the following url: http://<rkd_server_name>/api/online-reports/<image_name>.JPG.ashx

For example: http://api.rkd.reuters.com/api/online-reports/2009-02-08T153205Z_01_AMSE517175M00_RTROPTP_1_ORUTP-UKRAINE-GOVERNMENT-LOAN.JPG.ashx

To retrieve the Thumbnail JPEG images associated with the online report, use the picture locations that are given in the <SR> element in the response body:

XML Sample Response

```
<SR>
  <Origin Type="StoryRef">urn:newsml:online-report.com:20120126:nRTROPT20120126111648TRE80P0MI</Origin>
  <Origin Type="ThumbnailRef">http://api.rkd.reuters.com/api/online-reports/2012-01-26T111648Z_1_BTRE80P0VC300_RTROPTP_1_OUKSP-UK-OLYMPICS-CYCLING.JPG.ashx</Origin>
  <Origin Type="ThumbnailRefSecure">https://api.rkd.reuters.com/api/online-reports/2012-01-26T111648Z_1_BTRE80P0VC300_RTROPTP_1_OUKSP-UK-OLYMPICS-CYCLING.JPG.ashx</Origin>
```



```
<Origin Type="ThumbnailRefMPLS">http://api.rkd.reutest.com/api/onlineereports/2012-01-26T111648Z_1_BTRE80P0VC300_RTROPTP_1_OUKSP-UK-OLYMPICS-CYCLING.JPG.ashx</Origin>
<Origin Type="ThumbnailRefSecureMPLS">https://api.rkd.reutest.com/api/onlineereports/2012-01-26T111648Z_1_BTRE80P0VC300_RTROPTP_1_OUKSP-UK-OLYMPICS-CYCLING.JPG.ashx</Origin>
<Origin Type="ViewRef">http://api.rkd.reured.com/api/onlineereports/2012-01-26T111648Z_1_BTRE80P0VC300_RTROPTP_2_OUKSP-UK-OLYMPICS-CYCLING.JPG.ashx</Origin>
<Origin Type="ViewRefSecure">https://api.rkd.reured.com/api/onlineereports/2012-01-26T111648Z_1_BTRE80P0VC300_RTROPTP_2_OUKSP-UK-OLYMPICS-CYCLING.JPG.ashx</Origin>
<Origin Type="ViewRefMPLS">http://api.rkd.reutest.com/api/onlineereports/2012-01-26T111648Z_1_BTRE80P0VC300_RTROPTP_2_OUKSP-UK-OLYMPICS-CYCLING.JPG.ashx</Origin>
<Origin Type="ViewRefSecureMPLS">https://api.rkd.reutest.com/api/onlineereports/2012-01-26T111648Z_1_BTRE80P0VC300_RTROPTP_2_OUKSP-UK-OLYMPICS-CYCLING.JPG.ashx</Origin>
<Origin Type="BaseRef">http://api.rkd.reured.com/api/onlineereports/2012-01-26T111648Z_1_BTRE80P0VC300_RTROPTP_3_OUKSP-UK-OLYMPICS-CYCLING.JPG.ashx</Origin>
<Origin Type="BaseRefMPLS">http://api.rkd.reutest.com/api/onlineereports/2012-01-26T111648Z_1_BTRE80P0VC300_RTROPTP_3_OUKSP-UK-OLYMPICS-CYCLING.JPG.ashx</Origin>
<Origin Type="BaseRefSecure">https://api.rkd.reured.com/api/onlineereports/2012-01-26T111648Z_1_BTRE80P0VC300_RTROPTP_3_OUKSP-UK-OLYMPICS-CYCLING.JPG.ashx</Origin>
<Origin Type="BaseRefMPLS">http://api.rkd.reutest.com/api/onlineereports/2012-01-26T111648Z_1_BTRE80P0VC300_RTROPTP_3_OUKSP-UK-OLYMPICS-CYCLING.JPG.ashx</Origin>
<Origin Type="BaseRefSecureMPLS">https://api.rkd.reutest.com/api/onlineereports/2012-01-26T111648Z_1_BTRE80P0VC300_RTROPTP_3_OUKSP-UK-OLYMPICS-CYCLING.JPG.ashx</Origin>
<Origin Type="StoryTitle">London to host cycling festival after Games</Origin>
<Origin Type="StoryCreationDate">20120126T111648+0000</Origin>
<Origin Type="ImageCreationDate">20120126T111648+0000</Origin>
<Origin Type="ChannelCode">OLGBSPORT</Origin>
<Origin Type="LinkTitle">Reuters UK Online Report Sports News</Origin>
</SR>
```

In order to retrieve a Thumbnail image, the required URL is:

http://rkd_server_name/api/onlineereports/2012-01-26T111648Z_1_BTRE80P0VC300_RTROPTP_1_OUKSP-UK-OLYMPICS-CYCLING.JPG

One report may include up to three pictures. They can have two resolutions:

- Thumbnail image (approx 8-10 kb) - 150px for long side (short side can vary)
- View and Base images (approx 19-24 kb) - 800px for long side (short side can vary)

To find the image name for the different sizes, look for the "Type" attribute, which describes the type of image and the protocol:

ThumbnailRef, ViewRef, BaseRef - for HTTP

ThumbnailRefSecure, ViewRefSecure, BaseRefSecure - for HTTPS

ThumbnailRefMPLS, ViewRefMPLS, BaseRefMPLS - for HTTP+MPLS

ThumbnailRefSecureMPLS, ViewRefSecureMPLS, BaseRefSecureMPLS - for HTTPS+MPLS

XML Sample Response

```
<SR>
<Origin Type="StoryRef">urn:newsml:onlineereport.com:20120126:nRTROPT20120126111648TRE80P0MI</Origin>
<Origin Type="ThumbnailRef">http://api.rkd.reured.com/api/onlineereports/2012-01-26T111648Z_1_BTRE80P0VC300_RTROPTP_1_OUKSP-UK-OLYMPICS-CYCLING.JPG.ashx</Origin>
<Origin Type="ThumbnailRefSecure">https://api.rkd.reured.com/api/onlineereports/2012-01-26T111648Z_1_BTRE80P0VC300_RTROPTP_1_OUKSP-UK-OLYMPICS-CYCLING.JPG.ashx</Origin>
<Origin Type="ThumbnailRefMPLS">http://api.rkd.reutest.com/api/onlineereports/2012-01-26T111648Z_1_BTRE80P0VC300_RTROPTP_1_OUKSP-UK-OLYMPICS-CYCLING.JPG.ashx</Origin>
<Origin Type="ThumbnailRefSecureMPLS">https://api.rkd.reutest.com/api/onlineereports/2012-01-26T111648Z_1_BTRE80P0VC300_RTROPTP_1_OUKSP-UK-OLYMPICS-CYCLING.JPG.ashx</Origin>
<Origin Type="ViewRef">http://api.rkd.reured.com/api/onlineereports/2012-01-26T111648Z_1_BTRE80P0VC300_RTROPTP_2_OUKSP-UK-OLYMPICS-CYCLING.JPG.ashx</Origin>
<Origin Type="ViewRefSecure">https://api.rkd.reured.com/api/onlineereports/2012-01-26T111648Z_1_BTRE80P0VC300_RTROPTP_2_OUKSP-UK-OLYMPICS-CYCLING.JPG.ashx</Origin>
<Origin Type="ViewRefMPLS">http://api.rkd.reutest.com/api/onlineereports/2012-01-26T111648Z_1_BTRE80P0VC300_RTROPTP_2_OUKSP-UK-OLYMPICS-CYCLING.JPG.ashx</Origin>
<Origin Type="ViewRefSecureMPLS">https://api.rkd.reutest.com/api/onlineereports/2012-01-26T111648Z_1_BTRE80P0VC300_RTROPTP_2_OUKSP-UK-OLYMPICS-CYCLING.JPG.ashx</Origin>
<Origin Type="BaseRef">http://api.rkd.reured.com/api/onlineereports/2012-01-26T111648Z_1_BTRE80P0VC300_RTROPTP_3_OUKSP-UK-OLYMPICS-CYCLING.JPG.ashx</Origin>
<Origin Type="BaseRefSecure">https://api.rkd.reured.com/api/onlineereports/2012-01-26T111648Z_1_BTRE80P0VC300_RTROPTP_3_OUKSP-UK-OLYMPICS-CYCLING.JPG.ashx</Origin>
<Origin Type="BaseRefMPLS">http://api.rkd.reutest.com/api/onlineereports/2012-01-26T111648Z_1_BTRE80P0VC300_RTROPTP_3_OUKSP-UK-OLYMPICS-CYCLING.JPG.ashx</Origin>
```



```
<Origin Type="BaseRefSecureMPLS">https://api.rkd.reutest.com/api/online-reports/2012-01-26T111648Z_1_BTRE80P0VC300_RTROPTP_3_OUKSP-UK-OLYMPICS-CYCLING.JPG.ashx</Origin>
<Origin Type="StoryTitle">London to host cycling festival after Games</Origin>
<Origin Type="StoryCreationDate">20120126T111648+0000</Origin>
<Origin Type="ImageCreationDate">20120126T111648+0000</Origin>
<Origin Type="ChannelCode">OLGBSPORT</Origin>
<Origin Type="LinkTitle">Reuters UK Online Report Sports News</Origin>
</SR>
```

Thus, for instance, to retrieve the View image for this story, use the following url:

http://rkd_server_name/api/online-reports/2012-01-26T111648Z_1_BTRE80P0VC300_RTROPTP_2_OUKSP-UK-OLYMPICS-CYCLING.JPG

Note: If the <SR> element contains only a Thumbnail image, it is necessary to make the GetSummaryByStories_Request_1 with 'ImageRef' to retrieve a View image.

Example:

XML Sample Response

```
<SR>
<Origin Type="ThumbnailRef">http://api.rkd.reuters.com/api/online-reports/2009-02-13T044627Z_01_BTRE51C0D9K00_RTROPTP_1_SPORTS-US-CYCLING-CALIFORNIA.JPG.ashx</Origin>
<Origin Type="ImageRef">urn:newsml:online-report.com:20090213:nBTRE51C0D9K0020090213044627</Origin>
<Origin Type="ImageTitle">Astana cyclist Lance Armstrong laughs as he takes questions during pre-race news conference in Sacramento</Origin>
<Origin Type="ChannelCode">OLUSSPORT</Origin>
<Origin Type="LinkTitle">Reuters US Online Report Sports News</Origin>
<Origin Type="StoryCreationDate">20090213T032756+0000</Origin>
<Origin Type="ImageCreationDate">20090213T044627+0000</Origin>
</SR>
```

GetSummaryByStories_Response_1 for urn:newsml:online-report.com:20090213:nBTRE51C0D9K0020090213044627

```
<SR>
<Origin Type="StoryRef">urn:newsml:online-report.com:20090213:nTRE51C0T520090213032756</Origin>
<Origin Type="ThumbnailRef">http://api.rkd.reuters.com/api/online-reports/2009-02-13T044627Z_01_BTRE51C0D9K00_RTROPTP_1_SPORTS-US-CYCLING-CALIFORNIA.JPG.ashx</Origin>
<Origin Type="ViewRef">http://api.rkd.reuters.com/api/online-reports/2009-02-13T044627Z_01_BTRE51C0D9K00_RTROPTP_2_SPORTS-US-CYCLING-CALIFORNIA.JPG.ashx</Origin>
<Origin Type="BaseRef">http://api.rkd.reuters.com/api/online-reports/2009-02-13T044627Z_01_BTRE51C0D9K00_RTROPTP_3_SPORTS-US-CYCLING-CALIFORNIA.JPG.ashx</Origin>
<Origin Type="StoryTitle">Armstrong feeling fresh for Tour of California</Origin>
<Origin Type="StoryCreationDate">20090213T032756+0000</Origin>
<Origin Type="ImageCreationDate">20090213T044627+0000</Origin>
<Origin Type="ChannelCode">OLUSSPORT</Origin>
<Origin Type="LinkTitle">Reuters US Online Report Sports News</Origin>
</SR>
```

29.8 Retrieving only relevant Stories with GetSummaryByTopic_1

We recommend using the combination of GetHeadlines_2 and GetSummaryByStory_1 as the basic method to retrieve online reports. GetHeadlines_2 returns only the relevant story headlines chosen by Thomson Reuters editorial for a given topic. This allows acquiring relevant stories with minimal processing on the client side.

If the demand to make only one service call is more crucial than the demand to reduce processing effort, then GetSummaryByTopic_1 can be used instead. One of the possible ways to get relevant and unique headlines in this case is to call the GetSummaryByTopic_1 request and use the body of the **first** returned story (**first** OLR Headline). This story contains the list of unique headlines returned by GetHeadlines_2 as explained above that can be used to select the needed stories from the response. If HTML-decoded it usually looks like the following:

XML Sample Request

```
<p>
<Origin Href="StoryRef">urn:newsml:online-report.com:20100219:nTRE61I37Q20100219144148</Origin>
```



Catalyst leads second, \$120 million Canwest bid

<p>OTTAWA (Reuters) - A second bid for the broadcast arm of Canada's Canwest <CGS.V> media empire emerged on Friday as a consortium led by private equity fund Catalyst Capital and backed by Goldman Sachs Group Inc <GS.N> offered \$120 million for the bankrupt television operation.</p>

<Origin Href="ThumbnailRef">2010-02-19T141835Z_01_BTRE61I13R300_RTROPTP_1_CBUSINESS-US-CANWEST.JPG</Origin>

<Origin Href="ImageRef">urn:newsml:onlinereport.com:20100219:nBTRE61I13R30020100219141835</Origin>

<Origin Href="ImageTitle">A Canwest sign is seen outside an office building in Toronto</Origin>

<Origin Href="StoryCreationDate">20100219T144148+0000</Origin>

<Origin Href="ImageCreationDate">20100219T141835+0000</Origin>

</p>

<p>

<Origin Href="StoryRef">urn:newsml:onlinereport.com:20100219:nTRE61I2Z420100219155323</Origin>

Canadians spending way to recovery, data shows

<p>OTTAWA (Reuters) - Consumer spending and a sizzling housing market are powering Canada's economic recovery, two reports showed on Friday, suggesting a surge in growth at the end of last year will lead to a strong start to 2010.</p>

<Origin Href="ThumbnailRef">2010-02-19T133805Z_01_BTRE61I11VL00_RTROPTP_1_CBUSINESS-US-ECONOMY-RETAIL.JPG</Origin>

<Origin Href="ImageRef">urn:newsml:onlinereport.com:20100219:nBTRE61I11VL0020100219133805</Origin>

<Origin Href="ImageTitle">A woman cleans the shelves airport</Origin>

<Origin Href="StoryCreationDate">20100219T155323+0000</Origin>

<Origin Href="ImageCreationDate">20100219T133805+0000</Origin>

</p>

...

<p>

<Origin Href="StoryRef">urn:newsml:onlinereport.com:20100219:nTRE61I2SR20100219131502</Origin>

Canada to oppose global bank tax: report

<p>TORONTO (Reuters) - Canada will formally oppose international efforts by the world's major economies to impose a global bank tax as the current government favors lower taxes, Canada's National Post newspaper reported on Friday.</p>

<Origin Href="ThumbnailRef">2010-02-19T131459Z_01_BTRE61I10T200_RTROPTP_1_CBUSINESS-US-G20-BANKTAX-CANADA.JPG</Origin>

<Origin Href="ImageRef">urn:newsml:onlinereport.com:20100219:nBTRE61I10T20020100219131459</Origin>

<Origin Href="ImageTitle">Canada's PM Harper meets with business professionals in Ottawa</Origin>

<Origin Href="StoryCreationDate">20100219T131502+0000</Origin>

<Origin Href="ImageCreationDate">20100219T131459+0000</Origin>

</p>

Each <p> section represents a unique headline.



chapter 30 People Search

People Search service provides information about Corporate Officers and Directors. The basic search provides basic information based on either partial name or PersonID. Detailed search provides full detailed information including education, compensation history, certifications, etc. Relationship search gives a list of all other officers and directors of the companies with which a given person is associated.

The following operations are available through the People Search service:

- **Get Detail (GetDetail_1)** - retrieves corporate officers and director's data including compensation history.
- **Get Person Relationships (GetPersonRelationships_1)** - retrieves information on an officer's corporate affiliations or relationships within companies on the Reuters Fundamental database.
- **Get Relational Path (GetRelationalPath_1)** - retrieves details about relational path between two specified Person IDs.
- **Get Search (GetSearch_1)** - searches for a personal profile in a company.

30.1 Authentication/Authorization, Service Endpoint, and Required Headers

Authorization

All requests to the People Search service require an authorization token. For details, see section Understanding Authentication Tokens.

Authentication

Thomson Reuters People Search uses Reuters impersonation tokens for each effective user. In this case, Thomson Reuters must create each user before your application authenticates them. Unmanaged effective users are not supported in Reuters People Search.

For additional information on creating a Service Token, see section Creating a Token.

Service Endpoint

People Search Endpoint

<http://api.rkd.reuters.com/api/PeopleSearch/PeopleSearch.svc>

Required Header

Required HTTP Headers

POST api/PeopleSearch/PeopleSearch.svc HTTP/1.1
Content-Type: application/soap+xml
Host: api.rkd.reuters.com
Content-Length: [length]

30.2 WSDL

WSDL:

http://api.rkd.reuters.com/schemas/PeopleSearch/wsd/PeopleSearch_1_HttpAndRKDToken.wsdl



30.3 Get Detail (GetDetail_1)

The GetDetail_1 request is used to access corporate officers and director's data including compensation history.

The following example retrieves data for the officer with PersonID="3".

XML Sample Request - Retrieving Person Details

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/PeopleSearch/PeopleSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/02/04/webservices/rkd/PeopleSearch_1/GetDetail_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetDetail_Request_1 xmlns="http://www.reuters.com/ns/2009/02/04/webservices/rkd/PeopleSearch_1" PersonID="3" />
  </Body>
</Envelope>
```

The request can take the following attributes:

Attribute	Description
PersonID	Unique person ID (mandatory).
TransactionID	Transaction ID (optional).
lang	The language used for people search (optional). Can have the following values: - en-US (default) - ja-JP - zh-JHS

The response returns the following information:

XML Sample Response - Retrieving Person Details

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/02/04/webservices/rkd/PeopleSearch_1/GetDetail_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-02-12T14:04:32.1894661Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetDetail_Response_1 xmlns="http://www.reuters.com/ns/2009/02/04/webservices/rkd/PeopleSearch_1">
      <RequestArguments PersonID="3" lang="en-US"></RequestArguments>
      <PeopleAffiliations>
        <PeopleAffiliationDetail>
          <Person ID="3" Active="false"></Person>
          <PersonInformation>
            <LastModified Date="2005-11-12T08:26:54.113"></LastModified>
            <Name>
              <Info Type="LastName">Savitz</Info>
              <Info Type="FirstName">Richard</Info>
              <Info Type="MiddleInitial">J</Info>
              <Info Type="Age">53</Info>
              <Info Type="Sex">M</Info>
            </Name>
          </PersonInformation>
        </PeopleAffiliationDetail>
      </PeopleAffiliations>
    </GetDetail_Response_1>
  </s:Body>
</s:Envelope>
```



```

</PersonInformation>
<CorporateAffiliations>
  <Affiliation Order="1">
    <Company RepNo="48680" Name="Justin Industries, Inc." Active="false"></Company>
    <Officer ID="3" Title="Vice President-Finance, Treasurer, Secretary" Active="false"></Officer>
    <Address>
      <StreetAddress Line="1">2821 West 7th Street</StreetAddress>
      <City>Fort Worth</City>
      <StateOrRegion>Texas</StateOrRegion>
      <PostalCode>76107</PostalCode>
      <Country Code="USA">United States</Country>
    </Address>
    <IndustryClassification>
      <Taxonomy Type="RBSS2004">
        <Detail Order="1" Code="51221" Mnemonic="51221" Description="Construction Materials"></Detail>
      </Taxonomy>
    </IndustryClassification>
    <PositionInformation>
      <TenureDates>
        <OfficerStart Year="1982" Month="3"></OfficerStart>
        <OfficerEnd Year="2000" Month="8"></OfficerEnd>
      </TenureDates>
      <Titles>
        <Designation>
          <End Year="1999"></End>
          <LongTitle>Vice President-Finance, Treasurer, Secretary</LongTitle>
          <Title Order="0" ID="VFN">Vice President - Finance</Title>
          <Title Order="1" ID="TRS">Treasurer</Title>
          <Title Order="2" ID="SEC">Secretary</Title>
        </Designation>
        <Designation>
          <Start Year="1999"></Start>
          <End Year="2000" Month="8"></End>
          <LongTitle>Chief Financial Officer, Senior Vice President, Secretary</LongTitle>
          <Title Order="0" ID="CFO">Chief Financial Officer</Title>
          <Title Order="1" ID="SVP">Senior Vice President</Title>
          <Title Order="2" ID="SEC">Secretary</Title>
        </Designation>
      </Titles>
    </PositionInformation>
    <BiographicalInformation>
      <Text Type="Biography"></Text>
    </BiographicalInformation>
    <SalaryInformation>
      <CompensationPeriod EndDate="1999-12-31">
        <Submission Type="10-K405" Year="2000" Month="3" Day="29"></Submission>
        <CompensationCurrency>USD</CompensationCurrency>
        <CompensationInformation>
          <Compensation Type="Salary">263000</Compensation>
          <Compensation Type="Bonus">139390</Compensation>
          <Compensation Type="OtherST">148750</Compensation>
          <Compensation Type="TotalST">551140</Compensation>
          <Compensation Type="AllOtherLT">4213</Compensation>
          <Compensation Type="TotalComp">555353</Compensation>
        </CompensationInformation>
        <OptionsInformation>
          <Option Type="Exercised">
            <Number>8860</Number>
            <Value>67710</Value>
          </Option>
          <Option Type="Unexercised-Exercisable">
            <Number>58200</Number>
            <Value>269724</Value>
          </Option>
          <Option Type="Unexercised-Unexercisable">
            <Number>61000</Number>
            <Value>86000</Value>
          </Option>
        </OptionsInformation>
      </CompensationPeriod>
      <CompensationPeriod EndDate="1998-12-31">
        <Submission Type="10-K405" Year="1999" Month="3" Day="26"></Submission>
        <Submission Type="DEF 14A" Year="1999" Month="3" Day="12"></Submission>
        <CompensationCurrency>USD</CompensationCurrency>
        <CompensationInformation>

```



```

    <Compensation Type="Salary">225000</Compensation>
    <Compensation Type="Bonus">90000</Compensation>
    <Compensation Type="TotalST">315000</Compensation>
    <Compensation Type="AllOtherLT">4660</Compensation>
    <Compensation Type="TotalComp">319660</Compensation>
  </CompensationInformation>
  <OptionsInformation>
    <Option Type="Exercised">
      <Number>4640</Number>
      <Value>39225</Value>
    </Option>
    <Option Type="Unexercised-Exercisable">
      <Number>57060</Number>
      <Value>249246</Value>
    </Option>
    <Option Type="Unexercised-Unexercisable">
      <Number>36000</Number>
      <Value>37620</Value>
    </Option>
  </OptionsInformation>
</CompensationPeriod>
<CompensationPeriod EndDate="1997-12-31">
  <Submission Type="10-K"></Submission>
  <Submission Type="Proxy Statement"></Submission>
  <CompensationCurrency>USD</CompensationCurrency>
  <CompensationInformation>
    <Compensation Type="Salary">213000</Compensation>
    <Compensation Type="Bonus">102240</Compensation>
    <Compensation Type="TotalST">315240</Compensation>
    <Compensation Type="AllOtherLT">4410</Compensation>
    <Compensation Type="TotalComp">319650</Compensation>
  </CompensationInformation>
  <OptionsInformation>
    <Option Type="Unexercised-Exercisable">
      <Number>53700</Number>
      <Value>308285</Value>
    </Option>
    <Option Type="Unexercised-Unexercisable">
      <Number>29000</Number>
      <Value>32750</Value>
    </Option>
  </OptionsInformation>
</CompensationPeriod>
</SalaryInformation>
</Affiliation>
</CorporateAffiliations>
</PeopleAffiliationDetail>
</PeopleAffiliations>
</GetDetail_Response_1>
</Body>
</Envelope>

```

For the description of elements returned by the response please see Understanding GetDetail_1 response section.

30.3.1 Understanding GetDetail_1 Response

The PeopleAffiliations element is the main element of interest. This section contains all of the officers and directors related information. Information for each officer begins with a Person ID tag. The Person ID enables identification of the relationship between the individual and companies.

Active persons are ordered in the file by their rank. Each active person is ranked using a system of sub-ranks for each title (e.g. Chairman of the Board ranked higher than CEO, which in turn is ranked higher than VP). Inactive persons are not ranked in the OD file, and are ordered by their most recent End Date.

Person Active indicates whether an individual (person) is 'true' (active) or 'false' (inactive) and is derived from Officer Status and Company Status. If a person is active, all person-specific fields will be updated regardless of Officer Active status. A person is "active" when at least one associated Officer ID is active, and the company associated with that Officer ID is active. If all associated Officer ID's are inactive or the Company Status for each active officer is inactive, then the Person Active will be 0 (inactive). Therefore, if a person belongs to two companies and one is inactive, the age will continue to be updated for both the active issue and the inactive issue. When companies themselves are inactivated, no changes are made to the officer information



contained in the database. Therefore Inactive companies will contain 'active' persons.

XML Sample

```
<PeopleAffiliations>
  <PeopleAffiliationDetail>
    <Person ID="3" Active="false"></Person>
    ....
  </PeopleAffiliations>
```

Each PeopleAffiliations element will also contain the following information divided up into sub-elements:

- Person Information
- Corporate Affiliations
- Position Information
- Biographical Information
- Salary Information

30.3.1.1 Corporate Affiliations

CorporateAffiliations section provides information on an officer's corporate affiliations or relationships within companies on the Reuters Fundamental database. Fields include RepNo (Report Number that represents the U.S GAAP filing associated to the Thomson Reuters Issue ADR ID), Company Name, Officer ID, Title, Address and Industry Classification for the company and will be listed per Order record.

IndustryClassification contains information about the company's primary industry classifications. While Thomson Reuters Fundamentals tags each company by up to 10 NAICS and 10 SIC codes, GetDetail_1 only contains the primary classification for each industry classification system (taxonomy).

Each IndustryClassification element contains the following information divided up into sub-elements:

- **Type:** Indicates type of classification.
- **Order:** In this case the order will always be 1 indicating primary classification.
- **Code:** Unique industry code.
- **Description:** Name of the industry.
- **Mnemonic:** A mnemonic for the code

XML Sample

```
<CorporateAffiliations>
  <Affiliation Order="1">
    <Company RepNo="48680" Name="Justin Industries, Inc." Active="false"></Company>
    <Officer ID="3" Title="Vice President-Finance, Treasurer, Secretary" Active="false"></Officer>
    <Address>
      <StreetAddress Line="1">2821 West 7th Street</StreetAddress>
      <City>Fort Worth</City>
      <StateOrRegion>Texas</StateOrRegion>
      <PostalCode>76107</PostalCode>
      <Country Code="USA">United States</Country>
    </Address>
    <IndustryClassification>
      <Taxonomy Type="RBSS2004">
        <Detail Order="1" Code="51221" Mnemonic="51221" Description="Construction Materials"></Detail>
      </Taxonomy>
    </IndustryClassification>
    .....
  </Affiliation>
</CorporateAffiliations>
```



30.3.1.2 Position Information

PositionInformation contains an element on each of the following items:

- **Tenure Dates**
- **Titles**
- **Committee Membership**

Tenure Dates - Tenure dates indicate the length of service for this person with this company. Tenure may be indicated for an Officer, Director or both. The existence of an End Date indicates that the person is no longer an Officer (or Director) with the company.

Note: The date is not given in regular Date format (YYYYMMDD) because some components of the date (e.g. the Day) may not be available. In some instances the Start Year may also not be available to Reuters. In such instances Start Year is populated with the string NA.

Titles - The Titles section details the various titles a person has held with a company, over time. Each Designation has a Start date, may have an End date, has a Long Title as reported by the company, and up to four titles. Thus, a company may report a person's most recent title as 'Chairman of the Board and Chief Executive Officer'. This will appear as the Long Title. The person will also be tagged with two 'title ID's': CHM =Chairman and CEO = Chief Executive Officer. If available, this title will also have a Start date. However, as the most current title, this will not have an End date. If this person was previously a VP of the company, then there will be another Designation record in the file. This could have a Long Title of Vice President and a title ID VP=Vice President. As this is not the most current title, this designation will have an End date.

Committee Memberships - This section details the various board committees a director sits on. Fields include committee, title and start/end date.

XML Sample

```
<PositionInformation>
  <TenureDates>
    <OfficerStart Year="1982" Month="3">/OfficerStart>
    <OfficerEnd Year="2000" Month="8">/OfficerEnd>
  </TenureDates>
  <Titles>
    <Designation>
      <End Year="1999">/End>
      <LongTitle>Vice President-Finance, Treasurer, Secretary</LongTitle>
      <Title Order="0" ID="VFN">Vice President - Finance</Title>
      <Title Order="1" ID="TRS">Treasurer</Title>
      <Title Order="2" ID="SEC">Secretary</Title>
    </Designation>
    <Designation>
      <Start Year="1999">/Start>
      <End Year="2000" Month="8">/End>
      <LongTitle>Chief Financial Officer, Senior Vice President, Secretary</LongTitle>
      <Title Order="0" ID="CFO">Chief Financial Officer</Title>
      <Title Order="1" ID="SVP">Senior Vice President</Title>
      <Title Order="2" ID="SEC">Secretary</Title>
    </Designation>
  </Titles>
</PositionInformation>
```

30.3.1.3 Biographical Information

This section provides an officer's biography. Information is collected for all companies on the Reuters Fundamental database where available and is unique per company.

XML Sample

```
<BiographicalInformation>
  <Text Type="Biography">Mr. Thomas H. Glocer is Chief Executive Officer of Thomson Reuters PLC. Mr. Glocer joined Reuters Group in 1993 as Vice President and Deputy Counsel, Reuters America. He held a number of senior leadership positions at Reuters, including
```



President of Reuters LatAm and Reuters America, before being named CEO of Reuters Group PLC in July 2001. He also served on the Reuters Board from 2000...</Text>
</BiographicalInformation>

30.3.1.4 Salary Information

This section contains information about an officers' remuneration, both salary (CompensationInformation) and stock options related (OptionsInformation). The information is provided on a periodic basis, with a period end date identifying each period.

The currency for the reported remuneration is provided with the tag CompensationCurrency. This currency may change over time. Non-stock option related compensation is listed under Compensation.

Various types of Compensation types are listed in the table below:

Item	Derived from	XML Tag	Description
1	Data Entry	Salary	Salary
2	Data Entry	Bonus	Bonus
3	Data Entry	OtherST	Other Short Term Compensation
4	=1+2+3	TotalST	Total Short Term Compensation
5	Data Entry	RestrictedStock	Value of Restricted Stock options
6	Data Entry	LTIP	Long Term Incentive Payout
7	Data Entry	AllOtherLT	Other Long Term Compensation
8	=4+5+6+7	TotalComp	Total Compensation

XML Sample

```
<SalaryInformation>
  <CompensationPeriod EndDate="1999-12-31">
    <Submission Type="10-K405" Year="2000" Month="3" Day="29"></Submission>
    <CompensationCurrency>USD</CompensationCurrency>
    <CompensationInformation>
      <Compensation Type="Salary">263000</Compensation>
      <Compensation Type="Bonus">139390</Compensation>
      <Compensation Type="OtherST">148750</Compensation>
      <Compensation Type="TotalST">551140</Compensation>
      <Compensation Type="AllOtherLT">4213</Compensation>
      <Compensation Type="TotalComp">555353</Compensation>
    </CompensationInformation>
    <OptionsInformation>
      <Option Type="Exercised">
        <Number>8860</Number>
        <Value>67710</Value>
      </Option>
      <Option Type="Unexercised-Exercisable">
        <Number>58200</Number>
        <Value>269724</Value>
      </Option>
      <Option Type="Unexercised-Unexercisable">
        <Number>61000</Number>
        <Value>86000</Value>
      </Option>
    </OptionsInformation>
  </CompensationPeriod>
  ....
</SalaryInformation>
```



30.3.1.5 Person Information

PersonInformation section contains information pertaining to the person's name, age (and date of birth) and sex.

Note: Person-specific fields are maintained on an individual level - i.e. as reported in a company's latest source document that an officer is associated with. All fields within the "PersonInformation" container element will be maintained until a person's status becomes inactive.

Name - Contains all information pertinent to an individual's name. Fields include first, middle, last and preferred name in addition to prefix and suffix. First and last name are required fields. Preferred name may include an officers/directors nickname and/or "western" name depending on their preference and origin.

Certifications - The certifications element will display a certificate obtained by a person during his/her lifetime. This information will not be linked to a date and will only display the certificate.

EducationHistory - This section provides information on the person's educational background. Fields include college, degree, major and graduation date, and will be listed per Degree record. If a person has multiple degrees from the same college, then two records are created.

XML Sample

```
<PersonInformation>
  <LastModified Date="2005-11-12T08:26:54.113"></LastModified>
  <Name>
    <Info Type="LastName">Savitz</Info>
    <Info Type="FirstName">Richard</Info>
    <Info Type="MiddleInitial">J</Info>
    <Info Type="Age">53</Info>
    <Info Type="Sex">M</Info>
  </Name>
</PersonInformation>
```

30.4 Get Person Relationships (GetPersonRelationships_1)

The GetPersonRelationships_1 request provides information on an officer's corporate affiliations or relationships within companies on the Thomson Reuters Fundamental database.

The following example retrieves person relationships information for the PersonID="3".

XML Sample Request - Retrieving Person Relationships Information

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/PeopleSearch/PeopleSearch.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/02/04/webservices/rkd/PeopleSearch_1/GetPersonRelationships_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetPersonRelationships_Request_1 xmlns="http://www.reuters.com/ns/2009/02/04/webservices/rkd/PeopleSearch_1" PersonID="3"></GetPersonRelationships_Request_1>
  </Body>
</Envelope>
```

The request can take the following attributes:

Attribute	Description



Person ID	Unique person ID (mandatory).
Transaction ID	Transaction ID (optional).
Language	The language used for people search (optional). Can have the following values: • en-US • ja-JP • zh-JHS
Current Relationships Only	Shows current relationships of the person (optional).
Directors Only	Shows officers and directors or directors only (optional).
Exclude	Allows you to add exclusions (optional). To add an exclusion you need to specify: • PersonID - person identifier. • RepNo - Report Number ID that represents the U.S. GAAP filing associated to the Reuters Issue ADR ID.

The response returns the following information for the PersonID="3":

XML Sample Response - Retrieving Person Relationships Information

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/02/04/webservices/rkd/PeopleSearch_1/
    GetPersonRelationships_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-02-12T14:04:32.1894661Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetPersonRelationships_Response_1 xmlns="http://www.reuters.com/ns/2009/02/04/webservices/rkd/PeopleSearch_1">
      <RequestArguments PersonID="3" lang="en-US" CurrentRelationshipsOnly="false" DirectorsOnly="false"></RequestArguments>
      <Person PersonID="3" ActiveStatus="false">
        <LastModified Date="2005-11-12T08:26:54.113"></LastModified>
        <Name>
          <Info Type="LastName">Savitz</Info>
          <Info Type="FirstName">Richard</Info>
          <Info Type="MiddleInitial">J</Info>
          <Info Type="Age">53</Info>
          <Info Type="Sex">M</Info>
        </Name>
        <CorporateAffiliations>
          <Affiliation>
            <Company IssuerID="2583" RepNo="48680" Name="Justin Industries, Inc." OrgID="26283" Active="false">
              <OfficersDirectors>
                <Officer>
                  <Person PersonID="1" ActiveStatus="false">
                    <LastModified Date="2005-11-12T08:26:54.113"></LastModified>
                    <Name>
                      <Info Type="LastName">Justin</Info>
                      <Info Type="FirstName">John</Info>
                      <Info Type="Age">83</Info>
                      <Info Type="Sex">M</Info>
                    </Name>
                  </Person>
                  <Position OfficerID="1" ActiveStatus="false" Title="Chairman of the Board, Chief Executive Officer, Director"></
                  Position>
                </Officer>
                ...
                ...
              </OfficersDirectors>
            </Affiliation>
            <Officer>
              <Person PersonID="8540" ActiveStatus="false">
                <LastModified Date="2008-03-26T06:27:55.257" />
                <Name>
                  <Info Type="LastName">Musolino</Info>
                  <Info Type="FirstName">Joseph</Info>
                  <Info Type="MiddleInitial">R</Info>
                  <Info Type="Age">67</Info>
                  <Info Type="Sex">M</Info>
                </Name>
              </Person>
            </Officer>
          </CorporateAffiliations>
        </Person>
      </GetPersonRelationships_Response_1>
    </s:Body>
  </s:Envelope>
```




```

        </Name>
        <CorporateAffiliations>
          <Affiliation>
            <Company IssuerID="3698" RepNo="71615" Name="Pool Energy Services Co." OrgID="29424"
              Active="false"></Company>
            <Position OfficerID="8540" ActiveStatus="false" Title="Director"></Position>
          </Affiliation>
          <Affiliation>
            <Company IssuerID="9319" RepNo="A12AE" Name="Edge Petroleum Corp." OrgID="112195"
              Active="true"></Company>
            <Position OfficerID="435074" ActiveStatus="false" Title="Director"></Position>
          </Affiliation>
        </CorporateAffiliations>
      </Person>
      <Position OfficerID="10" ActiveStatus="false" Title="Director"></Position>
    </Officer>
    ...
  </OfficersDirectors>
</Company>
<Position OfficerID="3" ActiveStatus="false" Title="Vice President-Finance, Treasurer, Secretary"></Position>
</Affiliation>
</CorporateAffiliations>
</Person>
</GetPersonRelationships_Response_1>
</Body>
</Envelope>

```

The response provides information on officer's corporate affiliations or relationships within companies on the Thomson Reuters Fundamental database. Each response can have the following fields:

Attribute	Description
Person	Contains information pertaining to the person's ID, name, age and sex.
Company	Contains company information. Includes the following fields: • IssuerID - unique Thomson Reuters-assigned Issuer ID. • RepNo - Report Number that represents the U.S GAAP filing associated to the Reuters Issue ADR ID. • Name - company name. • OrgID - unique organization identifier (default reference in web services). • Active - is company active or not.
Position	Contains details on person's position. Includes the following fields: • OfficerID - unique Officer ID within a company. • ActiveStatus - indicates whether an officer or director is 'true' (active) or 'false' (inactive). • Title - contains the title the person holds with a company.

30.5 Get Relational Path (GetRelationalPath_1)

The GetRelationalPath_1 request retrieves details about relational path between two specified Person IDs.

The following example requests data for PersonID="3" and PersonID="2":

XML Sample Request - Retrieving Relational Path Information
<pre> <Envelope xmlns="http://www.w3.org/2003/05/soap-envelope"> <Header> <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/PeopleSearch/PeopleSearch.svc</To> <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID> <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/02/04/webservices/rkd/PeopleSearch_1/ GetRelationalPath_1</Action> <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1"> <ApplicationID>[AppID]</ApplicationID> <Token>[service token]</Token> </Authorization> </Header> <Body> <GetRelationalPath_Request_1 xmlns="http://www.reuters.com/ns/2009/02/04/webservices/rkd/PeopleSearch_1" Person1ID="3" </pre>



```

Person2ID="2"></GetRelationalPath_Request_1>
</Body>
</Envelope>

```

The request can take the following attributes:

Attribute	Description
Person1 ID	Unique person ID (mandatory).
Person2 ID	Unique person ID (mandatory).
Show Num Paths	Defines number of paths to be displayed in the response (optional). Default value is '10'.
Transaction ID	Transaction ID (optional).
Language	The language used for people search (optional). Can have the following values: - en-US (default) - ja-JP - zh-JHS
Include Inactive Affiliations	Allows you to add exclusions (optional). Default value is '1'.

The response returns the following information for the specified Person IDs:

XML Sample Response - Retrieving Relational Path Information

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/02/04/webservices/rkd/PeopleSearch_1/GetRelationalPath_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-02-12T14:04:32.1894661Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetRelationalPath_Response_1 xmlns="http://www.reuters.com/ns/2009/02/04/webservices/rkd/PeopleSearch_1">
      <RequestArguments Person1ID="3" Person2ID="2"></RequestArguments>
      <RelationalPath TotalConnections="1" DisplayedConnections="1" Person1ID="3" Person2ID="2">
        <Connection Strength="1" Depth="1">
          <Relationship Order="1">
            <Person ID="3" Active="false">
              <LastModified Date="2005-11-12T08:26:54.113"></LastModified>
              <Name>
                <Info Type="LastName">Savitz</Info>
                <Info Type="FirstName">Richard</Info>
                <Info Type="MiddleInitial">J</Info>
                <Info Type="Age">53</Info>
                <Info Type="Sex">M</Info>
              </Name>
              <PositionInformation>
                <Officer ID="3" Active="false">
                  <Titles>
                    <Designation>
                      <Start Year="1999"></Start>
                      <End Year="2000" Month="8"></End>
                      <LongTitle>Chief Financial Officer, Senior Vice President, Secretary</LongTitle>
                    </Designation>
                  </Titles>
                </Officer>
              </PositionInformation>
            </Person>
            <Person ID="2" Active="false">
              <LastModified Date="2007-02-22T07:37:59.997"></LastModified>
              <Name>
                <Info Type="LastName">Dickenson</Info>
                <Info Type="FirstName">J.</Info>
                <Info Type="MiddleInitial">T</Info>
                <Info Type="Age">70</Info>

```



```

    <Info Type="Sex">M</Info>
  </Name>
  <PositionInformation>
    <Officer ID="2" Active="false">
      <Titles>
        <Designation>
          <Start Year="1999" Month="4"></Start>
          <End Year="2000" Month="8"></End>
          <LongTitle>President, Chief Executive Officer, Director</LongTitle>
        </Designation>
      </Titles>
    </Officer>
  </PositionInformation>
</Person>
<Company RepNo="48680" Name="Justin Industries, Inc." Active="false"></Company>
</Relationship>
</Connection>
</RelationalPath>
</GetRelationalPath_Response_1>
</Body>
</Envelope>

```

The table below gives details on elements returned by the response:

Attribute	Description
RelationalPath	Shows details about the relational path between the two specified Person IDs. Includes the following elements: TotalConnections - total number of connections between the specified Person IDs. DisplayedConnections - number of displayed connections.
Connection	Provides details about each displayed connection between the specified person IDs. Includes: - Strength - Depth
Person	Contains information pertaining to the person's ID, name, age and sex.
PositionInformation	Contains unique Officer ID and details the various titles a person has held with a company, over time. Officer ID - Unique Officer ID. This ID does not change, and is not re-used. While an Officer ID indicates a unique person within a company, the same person will be assigned a different Officer ID in the context of a different company. In addition to Officer ID, the Person ID will be presented as a separate element and will enable identification of the relationship between the individual and companies. Active - indicates whether an officer and/or director is active ('true') or inactive ('false'). Designation - Each Designation has a Start date, may have an End date, has a Long Title as reported by the company, and up to four titles. Thus, a company may report a person's most recent title as 'Chairman of the Board and Chief Executive Officer'. This will appear as the Long Title. The person will also be tagged with two 'title ID's': CHM =Chairman and CEO = Chief Executive Officer. If available, this title will also have a Start date. However, as the most current title, this will not have an End date. If this person was previously a VP of the company, then there will be another Designation record in the file. This could have a Long Title of Vice President and a title ID VP=Vice President. As this is not the most current title, this designation will have an End date.
Company	Contains company information. Includes the following fields: RepNo - Report Number that represents the U.S GAAP filing associated to the Reuters Issue ADR ID. Name - company name. Active - is company active or not.

30.6 Get Search (GetSearch_1)

The GetSearch_1 request can be used to search for a personal profile in a company.

The following example requests information for PersonID="3":

XML Sample Request - Making a Search

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>

```



```

<To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/PeopleSearch/PeopleSearch.svc</To>
<MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
<Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/02/04/webservices/rkd/PeopleSearch_1/
GetSearch_1</Action>
<Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
  <ApplicationID>[AppID]</ApplicationID>
  <Token>[service token]</Token>
</Authorization>
</Header>
<Body>
  GetSearch_Request_1 xmlns="http://www.reuters.com/ns/2009/02/04/webservices/rkd/PeopleSearch_1" PersonID="3"></
  GetSearch_Request_1>
</Body>
</Envelope>

```

When searching for a personal profile you can use the following attributes:

Attribute	Description
Person ID	Unique person ID.
Last Name	Enables search by person's last name.
First Name	Enables search by person's first name.
Preferred Name	Enables search by person's preferred name.
Transaction ID	Enables search by transaction ID.
Language	The language used for people search (optional). Can have the following values: - en-US (default) - ja-JP - zh-JHS
Allow Partial Last Name	Enables partial search by part of person's last name. Default value is '0'.
Allow Partial First Name	Enables partial search by part of person's first name. Default value is '0'.
Allow Partial Preferred Name	Enables partial search by part of person's preferred name. Default value is '0'.
Include Inactive Affiliations	Includes inactive affiliations. Default value is '1'.

The response returns the following information for the specified Person IDs:

XML Sample Response - Making a Search

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/02/04/webservices/rkd/PeopleSearch_1/GetSearch_1_Reply</a:
    Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-02-12T14:04:32.1894661Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetSearch_Response_1 xmlns="http://www.reuters.com/ns/2009/02/04/webservices/rkd/PeopleSearch_1">
      <RequestArguments PersonID="3" AllowPartialLastName="false" AllowPartialFirstName="false" AllowPartialPreferredName="false"
      IncludeInactiveAffiliations="true" lang="en-US"></RequestArguments>
      <People>
        <PersonID>3</PersonID>
        <PersonActiveStatus>false</PersonActiveStatus>
        <LastName>Savitz</LastName>
        <FirstName>Richard</FirstName>
        <MiddleInitial>J</MiddleInitial>
        <Sex>M</Sex>
        <Age>53</Age>
        <RepNo>48680</RepNo>
        <CompanyName>Justin Industries, Inc.</CompanyName>
        <OfficerID>3</OfficerID>
      </People>
    </GetSearch_Response_1>
  </s:Body>
</s:Envelope>

```



```
<OfficerActiveStatus>false</OfficerActiveStatus>
<Title>Chief Financial Officer, Senior Vice President, Secretary</Title>
</People>
</GetSearch_Response_1>

</Body>
</Envelope>
```

The table below gives details on elements returned by the response:

Attribute	Description
PersonID	Unique person identifier.
PersonActive Status	Indicates whether an individual (person) is active ('true') or inactive ('false') and is derived from Officer Status and Company Status.
LastName	Person's last name.
FirstName	Person's first name.
MiddleInitial	Person's middle initial.
Sex	Person's sex.
Age	Person's age.
RepNo	Report Number that represents the U.S GAAP filing associated to the Reuters Issue ADR ID.
CompanyName	Company name.
OfficerID	Unique Officer ID within a company.
OfficerActive Status	Indicates whether an officer or director is 'true' (active) or 'false' (inactive).
Title	Contains the title the person holds with a company.



chapter 31 Permissioning

The Permissioning service can be used to add or update permission and membership information for users and user groups.

31.1 Authentication/Authorization, Service Endpoint, and Required Headers

Authorization

All requests to the Thomson Reuters Permissioning service require an authorization token. For details, see section Understanding Authentication Tokens.

Authentication

Thomson Reuters Permissioning service uses Reuters impersonation tokens for each effective user. In this case, Thomson Reuters must create each user before your application authenticates them. Unmanaged effective users are not supported in Reuters Permissioning.

For additional information on creating a Service Token, see section Creating a Token.

Service Endpoint

Permissioning Endpoint

<http://api.rkd.reuters.com/api/Permissioning/Permissioning.svc>

Required Header

Required HTTP Headers

POST api/Permissioning/Permissioning.svc HTTP/1.1
Content-Type: application/soap+xml
Host: api.rkd.reuters.com
Content-Length: [length]

31.2 WSDL

WSDL:

http://api.rkd.reuters.com/schemas/Permissioning/wsd/Permissioning_1_HttpAndRKDToken.wsdl

31.3 Set Permissioning Groups Membership (SetPermGroupsMembership_1)

You can use the SetPermGroupsMembership_1 request to set membership information of users in a particular global user group. In case when members already exist, the membership information is updated. To set membership information you have to specify either user alias OR User ID and Company ID. Also, you need to enter specify Permissioning Group Identity.

Note: All users must be assigned permissions in order to access underlying content/functionality. Once a user is created with the Create_1 request, the SetPermGroupsMembership_1 request must be called to assign the new user to the specific permissions as an effective user in TRKD API.

The following example sets the membership information for a user with alias 'beth@ztest.com'.



XML Sample Request - Setting Permissioning Groups Membership

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Permissioning/Permissioning.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/08/08/webservices/rkd/Permissioning_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <SetPermGroupsMembership_Request_1 xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/Permissioning_1">
      <permGroupMembership>
        <identity xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/RightsOwnerships_1">
          <user>
            <alias xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/Company_1">beth@ztest.net</alias>
          </user>
          <permGroup>
            <ID xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/Rights_1">5658</ID>
          </permGroup>
        </identity>
      </permGroupMembership>
    </SetPermGroupsMembership_Request_1>
  </Body>
</Envelope>

```

The response returns the following information:

XML Sample Response - Setting Permissioning Groups Membership

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/08/08/webservices/rkd/Permissioning_1/SetPermGroupsMembership_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <SetPermGroupsMembership_Response_1 xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/Permissioning_1"/>
  </Body>
</Envelope>

```

Note: Keep in mind that once permission group membership is set, the permissions from that group do not come into effect immediately. They become effective in 4-5 hours depending on NY time (GMT -4/-5).



chapter 32 Portfolio Tracker

The Portfolio Tracker Service lets you or your users create, maintain, view and analyze portfolios and their multi-currency instruments, using latest prices and FX rates from Thomson Reuters Knowledge Direct (TRKD). The portfolios are either hosted by TRKD, or provided by the user in XML format using Client Portfolio View. Unlike Thomson Reuters hosted portfolio, Client Portfolio View is only present in a view based on the information entered into the request and is not saved on Thomson Reuters servers.

Note: For Thomson Reuters hosted portfolios, each portfolio may hold up to 75 instruments, and you may create up to 25 portfolios for each user ID.

32.1 Conflation

Thomson Reuters Knowledge Direct utilises a three second conflated feed as a source of its quotes data. This means that every three seconds the Thomson Reuters Knowledge Direct systems receive an update. This feed is used to supply data to TRKD delayed servers and provide real-time snap responses. Clients should be aware of this configuration aspect of the product in case there are differences in data highlighted when compared to alternate sources of the same data.

Note: The conflation on data on Thomson Reuters Knowledge API is 3 seconds for non-trade data (bid/ask, etc.).

32.2 Two Methods of Working with Portfolios

There are two different ways of using portfolio tracking, and you may choose one or both of these methods:

- **Thomson Reuters hosted Portfolios** As above, each user's portfolio details are hosted on the Thomson Reuters Knowledge Direct portfolio servers. In XML programmatic access, a complete set of operations is provided to let you create, calculate, display, amend and delete portfolios. The portfolio servers return data in XML format, giving you full flexibility in how your users access and view their portfolios, and how you integrate the portfolio tracker within your web-site.
See section Working with a Portfolio for details.
- **Client hosted Portfolios** If your users' real portfolios are held on your own systems, you may send a portfolio within a single request to the TRKD portfolio server for pricing and calculation, without Thomson Reuters storing any portfolio details. Each request is submitted to the portfolio server as a list of instruments and quantities, with a name and base currency, and the portfolio values are returned in XML format, giving you full flexibility in how you use the calculated portfolios.
Here TRKD API is acting as a pricing engine, calculating instrument and portfolio values using the latest available prices and FX rates. See section Client Portfolio View for details.

32.3 Authentication/Authorization, Service Endpoint, and Required Headers

Authorization

All requests to the Portfolio Tracker web service require an authorization token. For details, see section Understanding Authentication Tokens.

Authentication

In most implementations, Portfolio Tracker uses unmanaged impersonation tokens for each effective user. In this case, it is up to your application to supply (and otherwise manage) a unique identifier for each user; Thomson Reuters does not manage the user identities.

Portfolio Tracker also supports Reuters impersonation tokens for each effective user. In this case, Thomson Reuters must create each user before your application authenticates them.

For additional information on Service Token creation see section Creating a Token in the Authentication and Authorization chapter.

Service Endpoint

Portfolio Tracker Endpoint

<http://api.rkd.reuters.com/api/PortfolioTracker/PortfolioTracker.svc>

Required Header

Required HTTP Headers

POST api/PortfolioTracker/PortfolioTracker.svc HTTP/1.1
Content-Type: application/soap+xml
Host: api.rkd.reuters.com
Content-Length: [length]

32.4 WSDL

WSDL:

http://api.rkd.reuters.com/schemas/PortfolioTracker/wsd/PortfolioTracker_1_HttpAndRKDToken.wsdl

32.5 Instrument Coverage

For Thomson Reuters hosted portfolios, each portfolio may hold up to 75 instruments, and you may create up to 25 portfolios for each user ID.

A portfolio may contain any of the following types of instrument, for instruments that are already included within your profile:

- exchange-traded stocks (example: RIC MSFT.O)
- indices (example: RIC .DJI)
- exchange warrants (example: RIC CH1031161.S)
- exchange bonds (example: RIC CH1037959=S)
- bonds (example: RIC US30YT=RR)
- exchange funds (example: RIC SWBZ.S)
- foreign exchange (example: RIC CHF=X)

You can include indices and FX in a portfolio but Portfolio Tracker excludes them from the portfolio calculations because a user cannot 'own' an index or foreign exchange.

32.6 Cash holding

The portfolio tracker does not store historical "buy" and "sell" records, and thus the portfolio calculations are based on unrealized profits of the instruments currently in the portfolio.

However a cash holding lets the user simulate the value of the portfolio over time. The user may choose to have a cash holding with each portfolio, and assign an initial cash value when the portfolio is created. Whenever the user "buys" a stock, the buy value is deducted from the cash holding.

Whenever the user "sells" a stock, the sale value is added to the cash holding. In addition, the user may adjust the cash based on fees (either fixed or percentage) with each "buy" and "sell".

Users can buy the same instrument several times at different buy prices. This may be represented either by an update to the existing instrument, or by adding a second instance of the same instrument in the portfolio.



32.7 Portfolio fields and calculations

The portfolio server uses specific fields to describe a portfolio and its instruments.

All the fields are defined in this section. Some fields are provided by the user. Other fields are calculated by the portfolio server using specific formulae.

RIC-level fields

RIC-level fields apply to the individual instruments within the portfolio.

Field	Description	Formula for calculated field
RICName	The RIC (Reuters Instrument Code) that identifies the instrument.	N/A Sourced from Portfolio database.
SecurityId	A number between 1 and 75 that identifies the RIC within the portfolio.	N/A Sourced from Portfolio database.
InstrumentName	The display name for the instrument.	N/A Sourced from Portfolio database.
Quantity	The current number of units of the instrument in the portfolio.	N/A Sourced from Portfolio database.
Buyprc	The average buy price for the instrument in its local trading currency. For an instrument trading in Tokyo Stock exchange, if there are two purchases of Qty 2 and Qty 3 at 3000 and 3500 Yen respectively, the average price = $(2 * 3000 + 3 * 3500) / 5 = 16500 / 5 = 3,300$ Yen.	N/A Sourced from Portfolio database.
Ccybuy	The average buy FX rate. If the portfolio base currency is USD and the USD/JPY rates were 100 and 110 at the time of two purchases given above, then average buy FX rate = $16500 / (6000/100 + 10500/110) = 16500 / (60 + 95.45) = 16500 / 155.45 = 106.14$.	N/A Sourced from Portfolio database. Note: Similarly to Ccynow this should accommodate denomination and reverse currencies. See details in Notes On FX Conversion.
Prcnow	The current price of the instrument in its local trading currency.	TRDPRC_1 (unless this value is blank in which case = HST_CLOSE).
Valnow	The current value of the instrument in its local trading currency. In this current example this would be $5 * 4000 = 20,000$ Yen	$\text{Instrument\_Prcnow} * \text{Instrument\_Quantity}$.
Ccynow	The current FX rate between the instrument's local trading currency and the portfolio base currency. If the portfolio's base currency is USD and the instrument's local trading currency is JPY, then this value will be say 110, i.e the current FX rate for USD/JPY.	$\text{Denom\_Rate} / \text{Conversion\_Rate}$. See details below in Notes On FX Conversion.
CcynowName	The instrument's local trading currency.	N/A Sourced from Portfolio database.
Valccy	The current value of the instrument in the portfolio base currency. In this current example, this would be $20,000 / 110 = 181.81$.	$\text{Instrument\_Prcnow} / \text{Instrument\_Ccynow}$.
Netccy	The net change of the instrument's value in the portfolio base currency, compared to its buy value. Considering the example used in above items, the net change will be = $\text{USD } 181.81 - (5 * 3300 / 106.14) = \text{USD } 181.81 - 155.45 = \text{USD } 26.36$.	$\text{Instrument\_Valccy} - (\text{Instrument\_Quantity} * \text{Instrument\_Buyprc} / \text{Instrument\_Ccybuy})$.
Pctccy	The percent change of the instrument's value in the portfolio base currency, compared to its buy value. Percentage change = $((181.81 / (181.81 - 26.36)) - 1) * 100 = 17\%$ approximately.	$(\text{Instrument\_Netccy} / (\text{Instrument\_Valccy} - \text{Instrument\_Netccy})) * 100$.
NetDay	The net change of the instrument's value in base currency on the current day.	$\text{Quantity} * (\text{Instrument\_Netchg} / \text{Instrument\_Ccynow})$.
Weight	The percentage of the portfolio that is held in the instrument.	$\text{Instrument\_valccy} / \text{Portfolio\_valccy}$.



Display_Name	The instrument's display name.	DSPLY_NAME from SDS quote request.
Currency	The instrument's local trading currency. This is identical to Ccynow name.	N/A Sourced from Portfolio database. Originally sourced from field CURRENCY from SDS quote request.
Last	The instrument's last price.	TRD_PRC1 from SDS quote request.
NetChg_1	The instrument's net change today.	
PctChg_1	The instrument's percent change today.	
Bid	The instrument's best bid.	
Ask	The instrument's best ask.	
ACVol_1	The instrument's today's volume.	
PERatio	The instrument's PE ratio.	
Yield	The instrument's dividend yield.	
Earnings	The instrument's earnings per share.	
Dividend	The instrument's dividend per share.	
DivPayDate	The instrument's dividend pay date.	
ExDivDate	The instrument's ex-dividend date.	

Portfolio-level fields

Portfolio-level fields apply to the whole portfolio. Some fields are calculated by aggregating RIC-level fields across all the instruments in the portfolio.

Field	Description	Formula for calculated field
PortfolioName	The portfolio's name, chosen by the user. For a given User ID, each portfolio name must be different.	N/A Sourced from Portfolio database.
CurrencyName	The portfolio's base currency, chosen by the user when creating the portfolio. All instrument's prices are converted into this base currency for the portfolio-level calculations. Default currency is USD.	N/A Sourced from Portfolio database.
Valccy	The current value of the portfolio in base currency.	$\Sigma (\text{Instrument\_Valccy}) + \text{Portfolio\_Cash}$.
Netccy	The net change for the portfolio in base currency.	$\Sigma (\text{Instrument\_Netccy})$.
Pctccy	The percentage change for the portfolio in base currency.	$(\text{Portfolio\_Netccy} / (\text{Portfolio\_Valccy} - \text{Portfolio\_Netccy} - \text{Portfolio\_Cash})) * 100$.
Netday	The net change for the portfolio in base currency on the current day.	$?(\text{Instrument\_Netday})$.
Pctday	The percentage change for the portfolio in base currency on the current day.	$(\text{Portfolio\_Netday} / (\text{Portfolio\_Valccy} - \text{Portfolio\_Netday} - \text{Portfolio\_Cash})) * 100$.
Weight	The total weight of the portfolio.	$\Sigma (\text{Instrument\_Weight}) + \text{Cash\_Weight}$.
CashBalance	The current value of the cash holding in base currency. This is optional, if the user requested a cash holding when creating the portfolio. This is updated automatically by the portfolio server whenever the user "buys" or "sells" instruments in the portfolio, or if the user manually edits the cash holding.	N/A Sourced from Portfolio database.
CashWeight	The percentage of the portfolio that is held in cash, if the cash is positive.	If Cash > 0 then Cash_Weight = Portfolio_Cash/ Portfolio_Valccy.



32.8 Working with a Portfolio

Each user's portfolio details are hosted on the Thomson Reuters server. The portfolio is effectively a model or simulation portfolio. The user can "buy" or "sell" shares within this simulation portfolio, but without making any real buy or sell transactions. Whenever the user simulates a "buy" or "sell", portfolio server automatically re-calculates the relevant portfolio values. In XML programmatic access, a complete set of functions is provided to let you create, calculate, display, amend and delete portfolios. The portfolio servers return data in XML format, giving you full flexibility in how your users access and view their portfolios, and how you integrate the portfolio tracker within your web-site.

32.8.1 Creating a Portfolio (CreatePortfolio_Request_1)

Each user is able to create and maintain up to 25 portfolios. The following example shows the XML Request for profile creation and its format.

XSD

XSD: http://api.rkd.reuters.com/schemas/PortfolioTracker/PortfolioTracker_1.xsd

The following example creates a portfolio with name "ZXCVB" and a cash balance of \$1000.

XML Sample Request - Creating a Portfolio

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/PortfolioTracker/PortfolioTracker.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/PortfolioTracker_1/
    CreatePortfolio_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <CreatePortfolio_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/PortfolioTracker_1">
      <PortfolioName>ZXCVB</PortfolioName>
      <CashBalance>1000</CashBalance>
      <Description>Description Text</Description>
    </CreatePortfolio_Request_1>
  </Body>
</Envelope>
```

Attribute	Description
PortfolioName	Name given to the portfolio.
Currency	Currency type being used in this portfolio.
CashBalance	Cash balance of the portfolio. Note: The maximum allowed decimal that is supported by the Portfolio Tracker service is one digit less precise than CLR decimal and is equal to 9,999,999,999,999,999,999,999,999,999. That precision is considered sufficient and no Portfolio Tracker service modifications are required.
Description	Optional text describing the Portfolio.

XML Sample Response -Creating a Portfolio

```
<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" s:mustUnderstand="1" >http://www.reuters.com/ns/2006/05/01/
    webservices/rkd/PortfolioTracker_1/CreatePortfolio_1_Reply</a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
```



```

<CreatePortfolio_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/PortfolioTracker_1">
  <PortfolioId>100</PortfolioId>
</CreatePortfolio_Response_1>

</Body>
</Envelope>

```

Attribute	Description
PortfolioID	Id of the created portfolio.

32.8.2 Get User Portfolios (GetUserPortfolios_Request_1)

XSD
XSD: http://api.rkd.reuters.com/schemas/PortfolioTracker/PortfolioTracker_1.xsd

The following example demonstrates how to retrieve the whole Profile list for a user. Note that the user information is included in the Authentication Token eliminating the need to enter it in the request (see section Creating a Service Token for more information).

XML Sample Request - Get User Portfolios

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/PortfolioTracker/PortfolioTracker.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/PortfolioTracker_1/GetUserPortfolios_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetUserPortfolios_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/PortfolioTracker_1" />
  </Body>
</Envelope>

```

XML Sample Response - Get User Portfolios

```

<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" s:mustUnderstand="1" >http://www.reuters.com/ns/2006/05/01/webservices/rkd/PortfolioTracker_1/GetUserPortfolios_1_Reply</a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[Message ID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetUserPortfolios_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/PortfolioTracker_1">
      <PortfolioId>100</PortfolioId>
    </GetUserPortfolios_Response_1>
  </Body>
</Envelope>

```

Attribute	Description
PortfolioID	Id of the created portfolio.



32.8.3 Editing a Portfolio (EditPortfolio_Request_1)

This operation lets you edit the portfolio's name, the cash value and select a View. Portfolio Tracker uses the view you selected to format the immediate reply and Portfolio Tracker does not save the view. You must not change the portfolio's base currency.

XSD

XSD: http://api.rkd.reuters.com/schemas/PortfolioTracker/PortfolioTracker_1.xsd

The following sample demonstrates how to edit a profile by changing its name from ZXCVB to Portfolio1.

XML Sample Request - Editing a Portfolio

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/PortfolioTracker/PortfolioTracker.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/PortfolioTracker_1/
    EditPortfolio_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
    <ApplicationID>[AppID]</ApplicationID>
    <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <EditPortfolio_Request_1 validationMode="Tolerant" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/
    PortfolioTracker_1">
      <PortfolioID>100</PortfolioID>
      <Currency>GBP</Currency>
      <NewName>Portfolio1</NewName>
      <UpdateCash>false</UpdateCash>
      <Description>Description Text </Description>
    </EditPortfolio_Request_1>
  </Body>
</Envelope>
```

Attribute	Description
validationMode	Sets the validation criterion for RICs. Possible values are: • Tolerant - ignores invalid RICs and returns data for valid RICs. • Strict - returns an error if a request contains an invalid RIC.
PortfolioID	Id of the portfolio that the change applies to.
Currency	Currency type used in this portfolio.
NewName	Profile name that will replace the current profile name.
UpdateCash	Allows updating cash balance of the portfolio.
CashBalance	Cash balance of the portfolio. Note: The maximum allowed decimal that is supported by the Portfolio Tracker service is one digit less precise than CLR decimal and is equal to 9,999,999,999,999,999,999,999,999. That precision is considered sufficient and no Portfolio Tracker service modifications are required.
View	Indicates how the return information should be formatted and what fields should be returned. By default the view is "Summary". Other available views are: • PL • Position • Prices • Valuation
Description	Optional text describing the Portfolio.

XML Sample Response - Editing a Portfolio

```
<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
```



```

<s:Header>
  <a:Action xmlns="http://www.w3.org/2005/08/addressing" s:mustUnderstand="1" >http://www.reuters.com/ns/2006/05/01/
  webservices/rkd/PortfolioTracker_1/EditPortfolio_1_Reply</a:Action>
  <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
</s:Header>
<s:Body>
  <EditPortfolio_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/PortfolioTracker_1">
    <Portfolio xsi:type="PortfolioSummaryView" >
      <PortfolioName>Portfolio1</PortfolioName>
      <CurrencyName>GBP</CurrencyName>
      <Valccy>509.55414</Valccy>
      <Netccy>0</Netccy>
      <Pctccy>0</Pctccy>
      <CashBalance>509.55414</CashBalance>
      <Description>Description Text</Description>
      <Netday>0</Netday>
      <Pctday>0</Pctday>
    </Portfolio>
  </EditPortfolio_Response_1>
</Body>
</Envelope>

```

Attribute	Description
Type	Indicates the view type selected on the request.
PortfolioName	Assigned name of the portfolio.
CurrencyName	Currency type used in the portfolio.
Valccy	The current value of the portfolio in base currency.
Netccy	The net change for the portfolio in base currency.
Pctccy	The percentage change for the portfolio in base currency.
CashBalance	The current value of the cash holding in base currency.
Description	Optional text describing the Portfolio.
Netday	The net change for the portfolio in base currency on the current day.
Pctday	The percentage change for the portfolio in base currency on the current day.

32.8.4 Deleting a Portfolio (DeletePortfolio_Request_1)

This operation lets you delete a portfolio along with any Instruments that the portfolio might have.

XSD
XSD: http://api.rkd.reuters.com/schemas/PortfolioTracker/PortfolioTracker_1.xsd

XML Sample Request - Delete Portfolio
<pre> <Envelope xmlns="http://www.w3.org/2003/05/soap-envelope"> <Header> <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/PortfolioTracker/PortfolioTracker.svc</To> <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID> <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/PortfolioTracker_1/ DeletePortfolio_1</Action> <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1"> <ApplicationID>[AppID]</ApplicationID> <Token>[Impersonation Token]</Token> </Authorization> </Header> <Body> <DeletePortfolio_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/PortfolioTracker_1"> <PortfolioId>100</PortfolioId> </DeletePortfolio_Request_1> </Body> </pre>



```
</Envelope>
```

Attribute	Description
PortfolioID	Id of the portfolio that should be deleted.

XML Sample Response - Delete Portfolio

```
<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" s:mustUnderstand="1" >http://www.reuters.com/ns/2006/05/01/
      webservices/rkd/PortfolioTracker_1/DeletePortfolio_1_Reply</a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <DeletePortfolio_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/PortfolioTracker_1">
      <PortfolioId>100</PortfolioId>
    </DeletePortfolio_Response_1>
  </s:Body>
</Envelope>
```

32.9 Working with Instruments

Once you create a portfolio you can fill it with instruments. The following sections describe how to work with instruments by using operations to add, buy, sell, edit and remove them.

32.9.1 Add Instruments (AddInstruments_Request_1)

This operation lets you add new instruments to a portfolio. The cash holding may be automatically adjusted. Only use AddInstruments_Request_1 to add details of instruments that are not already held in the portfolio.

Note: Use the BUY Instruments operation to buy more of an existing instrument.

XSD

XSD: http://api.rkd.reuters.com/schemas/PortfolioTracker/PortfolioTracker_1.xsd

XML Sample Request - Add Instruments

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/PortfolioTracker/PortfolioTracker.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/PortfolioTracker_1/
      AddInstruments_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <AddInstruments_Request_1 validationMode="Tolerant" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/
      PortfolioTracker_1">
      <PortfolioId>2</PortfolioId>
      <View>Position</View>
      <Instruments>
        <AddInstrumentData>
```




```

        <RICId>VOD.L</RICId>
        <DisplayName>VOD</DisplayName>
        <PersonalComments>Comment</PersonalComments>
        <Quantity>1000</Quantity>
        <BuyPrice>5</BuyPrice>
        <AdjustCash>true</AdjustCash>
        <FixedSum>0</FixedSum>
      </AddInstrumentData>
    </Instruments>
  </AddInstruments_Request_1>
</Body>
</Envelope>

```

Attribute	Description
validationMode	Sets the validation criterion for RICs. Possible values are: • Tolerant - ignores invalid RICs and returns data for valid RICs. • Strict - returns an error if a request contains an invalid RIC.
PortfolioId	Id of the portfolio that should be deleted.
View	Indicates how the response should be formatted and what fields will be returned. By default the View is Summary. See section Retrieving Portfolio Views for a full Views listing and information they provide.
AddInstrumentData	Contains information on a single or multiple instruments to be added to a Profile: Contains the following Attribute(s): • RICId: The RIC (Reuters Instrument Code) that identifies the instrument. • DisplayName: The display name for the instrument. • PersonalComments: A comment regarding this instrument. • Quantity: The current number of units of the instrument in the portfolio. • BuyPrice: Price per unit of the instrument being bought. • AdjustCash: Determines whether to deduct the added value from the cash holding of the portfolio. • FixedSum: The amount to be adjusted if AdjustCash is set to True.

XML Sample Response - Add Instruments

```

<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" s:mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/rkd/PortfolioTracker_1/AddInstruments_1_Reply</a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <AddInstruments_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/PortfolioTracker_1">
      <Portfolio xsi:type="PortfolioSummaryView">
        <PortfolioName>ZXCVB</PortfolioName>
        <CurrencyName>GBP</CurrencyName>
        <Valccy>3639.56</Valccy>
        <Netccy>2639.80</Netccy>
        <Pctccy>5279.6</Pctccy>
        <CashBalance>949.76</CashBalance>
        <Description>Description Text</Description>
        <Netday>-40.00</Netday>
        <Pctday>-1.46530879</Pctday>
        <Instrument>
          <RICName>VOD.L</RICName>
          <SecurityId>1</SecurityId>
          <InstrumentName>VODAFONE GROUP</InstrumentName>
          <PersonalComments>Comment</PersonalComments>
          <Quantity>1000</Quantity>
          <Prccnow>134.49</Prccnow>
          <Valnow>134490.00</Valnow>
          <Ccynow>100</Ccynow>
          <CcynowName>GBP</CcynowName>
          <Valccy>1344.90</Valccy>
        </Instrument>
      </Portfolio>
    </AddInstruments_Response_1>
  </s:Body>
</s:Envelope>

```



```

        <Netccy>1344.90</Netccy>
        <Pctccy>0</Pctccy>
    </Instrument>
    <Instrument>
        <RICName>VOD.L</RICName>
        <SecurityId>15</SecurityId>
        <InstrumentName>VOD</InstrumentName>
        <PersonalComments>Comment</PersonalComments>
        <Quantity>1000</Quantity>
        <Prccnow>134.49</Prccnow>
        <Valnow>134490.00</Valnow>
        <Ccynow>100</Ccynow>
        <CcynowName>GBP</CcynowName>
        <Valccy>1344.90</Valccy>
        <Netccy>1294.90</Netccy>
        <Pctccy>2589.8</Pctccy>
    </Instrument>
</Portfolio>
</AddInstruments_Response_1>
</Body>
</Envelope>

```

The information returned shows the View selected in the request. It contains profile information and along with all the instruments previously and currently added. For more information on a full list of Views and what each contains see chapter Retrieving Portfolio Views.

32.9.2 Buy Instruments (BuyInstruments_Request_1)

This operation lets you buy more of existing instruments at a different buy price and buy FX rate. The cash holding may be automatically adjusted.

Note: If you want to buy more of an existing instrument by creating a new item (and not adding to the existing item), use the ADD Instruments operation (AddInstrument_Request_1).

XSD

XSD: http://api.rkd.reuters.com/schemas/PortfolioTracker/PortfolioTracker_1.xsd

XML Sample Request - Buy Instruments

```

<Header>
  <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/PortfolioTracker/PortfolioTracker.svc</To>
  <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
  <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/PortfolioTracker_1/
  BuyInstruments_1</Action> <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
    <ApplicationID>[AppID]</ApplicationID>
    <Token>[Impersonation Token]</Token>
  </Authorization>
</Header>
<Body>
  <BuyInstruments_Request_1 validationMode="Tolerant" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/
  PortfolioTracker_1">
    <PortfolioId>2</PortfolioId>
    <View>Position</View>
    <Instruments>
      <BuyInstrumentData>
        <SecurityId>1</SecurityId>
        <DisplayName>VOD</DisplayName>
        <PersonalComments>Comment</PersonalComments>
        <Quantity>12</Quantity>
        <BuyPrice>2</BuyPrice>
        <AdjustCash>true</AdjustCash>
        <FixedSum>0</FixedSum>
      </BuyInstrumentData>
    </Instruments>
  </BuyInstruments_Request_1>

```



```
</Body>
</Envelope>
```

Attribute	Description
validationMode	Sets the validation criterion for RICs. Possible values are: • Tolerant - ignores invalid RICs and returns data for valid RICs. • Strict - returns an error if a request contains an invalid RIC.
PortfolioId	Id of the portfolio.
View	Indicates how the response should be formatted and what fields will be returned. By default the View is Summary. See section Retrieving Portfolio Views for a full Views listing and information they provide.
BuyInstrumentData	Contains information on a single or multiple instruments to be added to a Profile. Contains the following Attribute(s): • SecurityId: A number between 1 and 75 that identifies the RIC within the portfolio. • DisplayName: The display name for the instrument. • PersonalComments: A comment regarding this instrument. • Quantity: The current number of units of the instrument that should be added. • BuyPrice: Price per unit of the instrument being bought. • AdjustCash: Determines whether to deduct the buy value from the cash holding of the portfolio. • FixedSum: The amount to be adjusted if AdjustCash is set to True.

XML Sample Response - Buy Instruments

```
<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" s:mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/
webservices/rkd/PortfolioTracker_1/BuyInstruments_1_Reply </a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <BuyInstruments_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/PortfolioTracker_1">
      <Portfolio xsi:type="PortfolioSummaryView">
        <PortfolioName>ZXCVB</PortfolioName>
        <CurrencyName>GBP</CurrencyName>
        <Valccy>3655.4588</Valccy>
        <Netccy>2655.698956</Netccy>
        <Pctccy>5286.0415</Pctccy>
        <CashBalance>949.52</CashBalance>
        <Description>Description Text</Description>
        <Netday>-40.24</Netday>
        <Pctday>-1.46530879</Pctday>
        <Instrument>
          <RICName>VOD.L</RICName>
          <SecurityId>1</SecurityId>
          <InstrumentName>VODAFONE GROUP</InstrumentName>
          <PersonalComments>Comment</PersonalComments>
          <Quantity>1012</Quantity>
          <Prcnow>134.49</Prcnow>
          <Valnow>136103.88</Valnow>
          <Ccynow>100</Ccynow>
          <CcynowName>GBp</CcynowName>
          <Valccy>1361.0388</Valccy>
          <Netccy>1360.798956</Netccy>
          <Pctccy>567368.4</Pctccy>
        </Instrument>
        <Instrument>
          <RICName>VOD.L</RICName>
          <SecurityId>15</SecurityId>
          <InstrumentName>VOD</InstrumentName>
          <PersonalComments>Comment</PersonalComments>
          <Quantity>1000</Quantity>
          <Prcnow>134.49</Prcnow>
          <Valnow>134490.00</Valnow>
          <Ccynow>100</Ccynow>
          <CcynowName>GBp</CcynowName>
          <Valccy>1344.90</Valccy>
          <Netccy>1294.90</Netccy>
          <Pctccy>2589.8</Pctccy>
        </Instrument>
      </Portfolio>
    </BuyInstruments_Response_1>
  </s:Body>
</s:Envelope>
```



```

</Instrument>
</Portfolio>
</BuyInstruments_Response_1>

</Body>
</Envelope>

```

The information returned shows the View selected in the request. It contains profile information and along with all the instruments previously and currently added. For more information on a full list of Views and what each contains, see section Retrieving Portfolio Views.

32.9.3 Sell Instruments (SellInstruments_Request_1)

This operation lets you sell either part or all of existing instruments in the portfolio. The cash holding may be automatically adjusted with the sale value.

Note: If you want to completely delete an instrument, use the REMOVE Instrument operation (RemoveInstruments_Request_1).

XSD

XSD: http://api.rkd.reuters.com/schemas/PortfolioTracker/PortfolioTracker_1.xsd

XML Sample Request - Sell Instruments

```

<Header>
  <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/PortfolioTracker/PortfolioTracker.svc</To>
  <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
  <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/PortfolioTracker_1/SellInstruments_1</Action> xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
    <ApplicationID>[AppID]</ApplicationID>
    <Token>[Impersonation Token]</Token>
  </Authorization>
</Header>
<Body>
  <SellInstruments_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/PortfolioTracker_1">
    <PortfolioId>2</PortfolioId>
    <View>Prices</View>
    <Instruments>
      <SellInstrumentData>
        <SecurityId>1</SecurityId>
        <DisplayName>VOD</DisplayName>
        <PersonalComments>Comment</PersonalComments>
        <Quantity>10</Quantity>
        <SellPrice>5</SellPrice>
        <AdjustCash>true</AdjustCash>
        <FixedSum>0</FixedSum>
      </SellInstrumentData>
    </Instruments>
  </SellInstruments_Request_1>
</Body>
</Envelope>

```

Attribute	Description
validationMode	Sets the validation criterion for RICs. Possible values are: Tolerant - ignores invalid RICs and returns data for valid RICs. Strict - returns an error if a request contains an invalid RIC.
PortfolioId	Id of the portfolio.
View	Indicates how the response should be formatted and what fields will be returned. By default the View is Summary. See section Retrieving Portfolio Views for a full Views listing and information they provide.
SellInstrumentData	Contains information on a single Instrument or multiple instruments being sold. Contains the following Attribute(s):



- **SecurityId:** A number between 1 and 75 that identifies the RIC within the portfolio.
- **DisplayName:** The display name for the instrument.
- **PersonalComments:** A comment regarding this instrument.
- **Quantity:** The current number of units of the instrument that should be added.
- **SellPrice:** Per unit price of the instrument being sold.
- **AdjustCash:** Determines whether to add the sell value to the cash holding of the portfolio.
- **FixedSum:** The sum to be adjusted if AdjustCash is set to True.

XML Sample Response - Sell Instruments

```
<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" s:mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/
      webservices/rkd/PortfolioTracker_1/SellInstruments_1_Reply </a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <SellInstruments_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/PortfolioTracker_1">
      <Portfolio xsi:type="PortfolioPricesView" >
        <PortfolioName>ZXCVB</PortfolioName>
        <CurrencyName>GBP</CurrencyName>
        <Valccy>3642.5098</Valccy>
        <Netccy>2642.252326</Netccy>
        <Pctccy>5259.52441</Pctccy>
        <CashBalance>950.02</CashBalance>
        <Description>Description Text</Description>
        <Netday>-40.04</Netday>
        <Pctday>-1.46530879</Pctday>
        <Instrument>
          <RICName>VOD.L</RICName>
          <SecurityId>1</SecurityId>
          <InstrumentName>VODAFONE GROUP</InstrumentName>
          <PersonalComments>Comment</PersonalComments>
          <Currency>GBp</Currency>
          <Last>134.49</Last>
          <NetChg_1>-2</NetChg_1>
          <PctChg_1>-1.49</PctChg_1>
          <Bid>132.5</Bid>
          <Ask>133</Ask>
          <ACVol_1>313579550</ACVol_1>
        </Instrument>
        <Instrument>
          <RICName>VOD.L</RICName>
          <SecurityId>15</SecurityId>
          <InstrumentName>VOD</InstrumentName>
          <PersonalComments>Comment</PersonalComments>
          <Currency>GBp</Currency>
          <Last>134.49</Last>
          <NetChg_1>-2</NetChg_1>
          <PctChg_1>-1.49</PctChg_1>
          <Bid>132.5</Bid>
          <Ask>133</Ask>
          <ACVol_1>313579550</ACVol_1>
        </Instrument>
      </Portfolio>
    </SellInstruments_Response_1>
  </s:Body>
</Envelope>
```

The information returned shows the View selected in the request. It contains profile information and along with all the instruments previously and currently added. For more information on a full list of Views and what each contains, see chapter Retrieving Portfolio Views.

32.9.4 Edit Instruments (EditInstruments_Request_1)

This operation lets you correct details of one or more instruments in a portfolio. You can use this operation if you need to adjust any values manually, for example, in the event of a stock split or a rights issue. You can also use this operation to



correct any value that is incorrect. The cash holding is not updated.

Note: For normal "buying" and "selling" of instruments within the portfolio, you should use the ADD Instrument, BUY Instrument and SELL Instrument functions.

XSD

XSD: http://api.rkd.reuters.com/schemas/PortfolioTracker/PortfolioTracker_1.xsd

XML Sample Request - Edit Instruments

```
<Header>
  <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/PortfolioTracker/PortfolioTracker.svc</To>
  <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
  <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/PortfolioTracker_1/
    EditInstruments_1</Action> xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
    <ApplicationID>[AppID]</ApplicationID>
    <Token>[Impersonation Token]</Token>
  </Authorization>
</Header>
<Body>
  <EditInstruments_Request_1 validationMode="Tolerant" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/
    PortfolioTracker_1">
    <PortfolioId>397</PortfolioId>
    <View>Valuation</View>
    <Instruments>
      <EditInstrumentData>
        <SecurityId>377</SecurityId>
        <DisplayName>VOD</DisplayName>
        <PersonalComments>Comment</PersonalComments>
        <Quantity>100</Quantity>
        <LocalPrice>10</LocalPrice>
        <BasePrice>8</BasePrice>
      </EditInstrumentData>
    </Instruments>
  </EditInstruments_Request_1>
</Body>
</Envelope>
```

Attribute	Description
validationMode	Sets the validation criterion for RICs. Possible values are: • Tolerant - ignores invalid RICs and returns data for valid RICs. • Strict - returns an error if a request contains an invalid RIC.
PortfolioId	Id of the portfolio contains the Instruments.
View	Indicates how the response should be formatted and what fields will be returned. By default the View is Summary. See Retrieving Portfolio Views for a full Views listing and information they provide.
EditInstrumentData	The following information should be contained in each instrument being edited. Contains the following Attribute(s): • SecurityId: A number between 1 and 75 that identifies the RIC within the portfolio. • DisplayName: The display name for the instrument. • PersonalComments: A comment regarding this instrument. • Quantity: The number of units of the instrument. • LocalPrice: Specifies the buy/sell price of the security in its local currency. • BasePrice: Specifies the buy/sell price of the security in the portfolio's base currency.

XML Sample Response - Edit Instruments

```
<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" s:mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/
      webservices/rkd/PortfolioTracker_1/EditInstruments_1_Reply </a:Action>
```



```

    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <EditInstruments_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/PortfolioTracker_1">
      <Portfolio xsi:type="PortfolioSummaryView" >
        <PortfolioName>AA</PortfolioName>
        <CurrencyName>GBP</CurrencyName>
        <Valccy>1036.25</Valccy>
        <Netccy>-663.75</Netccy>
        <Pctccy>-82.96875</Pctccy>
        <CashBalance>900</CashBalance>
        <Description>Description Text</Description>
        <Netday>-1.7500</Netday>
        <Pctday>-1.268116</Pctday>
        <Instrument>
          <RICName>VOD.L</RICName>
          <SecurityId>377</SecurityId>
          <InstrumentName>VOD</InstrumentName>
          <PersonalComments>Comment</PersonalComments>
          <Quantity>100</Quantity>
          <Prcnow>136.25</Prcnow>
          <Valnow>13625.00</Valnow>
          <Ccynow>100</Ccynow>
          <CcynowName>GBP</CcynowName>
          <Valccy>136.25</Valccy>
          <Netccy>-663.75</Netccy>
          <Pctccy>-82.96875</Pctccy>
        </Instrument>
      </Portfolio>
    </EditInstruments_Response_1>
  </Body>
</Envelope>

```

The information returned shows the View selected in the request. It contains profile information and along with all the instruments previously and currently added. For more information on a full list of Views and what each contains, see section Retrieving Portfolio Views.

32.9.5 Remove Instruments (RemoveInstruments_Request_1)

This operation lets you completely delete specific instruments from the portfolio. The cash value is not changed.

Note: For normal "selling" of an instrument, you should use the SELL Instrument operation.

XSD

XSD: http://api.rkd.reuters.com/schemas/PortfolioTracker/PortfolioTracker_1.xsd

XML Sample Request - Remove Instrument

```

<Header>
  <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/PortfolioTracker/PortfolioTracker.svc</To>
  <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
  <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/PortfolioTracker_1/
    RemoveInstruments_1</Action> xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
    <ApplicationID>[AppID]</ApplicationID>
    <Token>[Impersonation Token]</Token>
  </Authorization>
</Header>
<Body>
  <RemoveInstruments_Request_1 validationMode="Tolerant" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/
    PortfolioTracker_1">
    <PortfolioId>2</PortfolioId>
    <View>PL</View>
    <Instruments>
      <RemoveInstrumentData>
        <SecurityId>15</SecurityId>

```



```

    </RemoveInstrumentData>
  </Instruments>
</RemoveInstruments_Request_1>

```

```

</Body>
</Envelope>

```

Attribute	Description
validationMode	Sets the validation criterion for RICs. Possible values are: Tolerant - ignores invalid RICs and returns data for valid RICs. Strict - returns an error if a request contains an invalid RIC.
PortfolioId	Id of the portfolio.
View	Indicates how the response should be formatted and what fields will be returned. By default the View is Summary. See section Retrieving Portfolio Views for a full Views listing and information they provide.
RemoveInstrumentData	Contains one or multiple SecurityIDs that will be removed. Contains the following Element(s): SecurityID: Contains a SecurityID of the instrument that should be removed. If there is more than one Instrument that should be removed then each should have its own SecurityID tag.

XML Sample Response - Remove Instrument

```

<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" s:mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/
webservices/rkd/PortfolioTracker_1/RemoveInstruments_1_Reply </a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <RemoveInstruments_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/PortfolioTracker_1">
      <Portfolio xsi:type="PortfolioSummaryView" >
        <PortfolioName>ZXCVB</PortfolioName>
        <CurrencyName>GBP</CurrencyName>
        <Valccy>2297.6098</Valccy>
        <Netccy>1347.352326</Netccy>
        <Pctccy>567368.4</Pctccy>
        <CashBalance>950.02</CashBalance>
        <PersonalComments>Comment</PersonalComments>
        <Netday>-20.04</Netday>
        <Pctday>-1.46530879</Pctday>
        <Instrument>
          <RICName>VOD.L</RICName>
          <SecurityId>1</SecurityId>
          <InstrumentName>VODAFONE GROUP</InstrumentName>
          <PersonalComments>Comment</PersonalComments>
          <Quantity>1002</Quantity>
          <Prcnow>134.49</Prcnow>
          <Valnow>134758.98</Valnow>
          <Ccynow>100</Ccynow>
          <CcynowName>GBp</CcynowName>
          <Valccy>1347.5898</Valccy>
          <Netccy>1347.352326</Netccy>
          <Pctccy>567368.4</Pctccy>
        </Instrument>
      </Portfolio>
    </RemoveInstruments_Response_1>
  </s:Body>
</Envelope>

```

The information returned shows the View selected in the request. It contains profile information along with all the instruments previously and currently added. For more information on a full list of Views and what each contains see chapter Retrieving Portfolio Views.



32.10 Retrieving Portfolio Views

Portfolio Tracker provides views as an easy way to show information for Profile analysis.

A portfolio may be analyzed in many ways. In XML, the GetView_1 method allows you to choose which particular view to display. The views are:

- Position View
- PL View
- Prices View
- Summary View
- Valuation View

32.10.1 Position View

Use Position View to see the current holdings within the portfolio.

XSD

XSD: http://api.rkd.reuters.com/schemas/PortfolioTracker/PortfolioTracker_1.xsd

XML Sample Request - Position View

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/PortfolioTracker/PortfolioTracker.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/PortfolioTracker_1/GetView_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetView_Request_1 validationMode="Tolerant" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/PortfolioTracker_1">
      <PortfolioID>1335382</PortfolioID>
      <View>Position</View>
    </GetView_Request_1>
  </Body>
</Envelope>
```

Attribute	Description
validationMode	Sets the validation criterion for RICs. Possible values are: • Tolerant - ignores invalid RICs and returns data for valid RICs. • Strict - returns an error if a request contains an invalid RIC.
PortfolioID	Id of the portfolio to view.
View	The type of the View.

XML Sample Response - Add Instruments

```
<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" s:mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/rkd/PortfolioTracker_1/GetView_1_Reply</a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetView_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/PortfolioTracker_1">
```



```

<Portfolio xsi:type="PortfolioPositionView" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <PortfolioName>portfolio1</PortfolioName>
  <CurrencyName>USD</CurrencyName>
  <Valccy>1148.16</Valccy>
  <Netccy>148.160096</Netccy>
  <Pctccy>61758.08</Pctccy>
  <CashBalance>999.76</CashBalance>
  <Netday>-2.24</Netday>
  <Pctday>-1.4869889</Pctday>
  <CashWeight>87.0749741</CashWeight>
  <Weight>100</Weight>
  <Instrument>
    <RICName>IBM.N</RICName>
    <SecurityId>512975</SecurityId>
    <InstrumentName>INTL BUS MACHINE</InstrumentName>
    <Exchange>NYS</Exchange>
    <Quantity>112</Quantity>
    <Prcnow>132.5</Prcnow>
    <Valnow>14840.0</Valnow>
    <Ccynow>100</Ccynow>
    <CcynowName>USD</CcynowName>
    <Valccy>148.4</Valccy>
    <Weight>12.9250278</Weight>
  </Instrument>
  ...
</Portfolio>
</GetView_Response_1>

</Body>
</Envelope>

```

Attribute	Description
PortfolioName	The portfolio's name, chosen by the user.
CurrencyName	The portfolio's base currency, chosen by the user when creating the portfolio.
Valccy	The current value of the portfolio in base currency.
Netccy	The net change for the portfolio in base currency.
Pctccy	The percentage change for the portfolio in base currency.
CashBalance	The current value of the cash holding in base currency.
Netday	The net change for the portfolio in base currency on the current day.
Pctday	The percentage change for the portfolio in base currency on the current day.
Cashweight	The percentage of the portfolio that is held in cash, if the cash is positive.
Weight	The total weight of the portfolio.
Instrument	Contains instrument information for the current View. Contains the following elements: • RICname: The RIC (Reuters Instrument Code) that identifies the instrument. • SecurityId: A number between 1 and 75 that identifies the RIC within the portfolio. • InstrumentName: The display name for the instrument. • Exchange: Name of the exchange where the instrument is traded. • Quantity: The current number of units of the instrument in the portfolio. • Prcnow: The current price of the instrument in its local trading currency. • Valnow: The current value of the instrument in its local trading currency. • Ccynow: The current FX rate between the instrument's local trading currency and the portfolio base currency. • CcynowName: The instrument's local trading currency. • Valccy: The current value of the instrument in the portfolio base currency. • Weight: The percentage of the portfolio that is held in the instrument.

32.10.2 PL View

Use PL View (Profit and Loss) to analyze why a profit or loss has been made on each instrument in the portfolio.



XSD

XSD: http://api.rkd.reuters.com/schemas/PortfolioTracker/PortfolioTracker_1.xsd

XML Sample Request - PL View

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/PortfolioTracker/PortfolioTracker.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/PortfolioTracker_1/
    GetView_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetView_Request_1 validationMode="Tolerant" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/PortfolioTracker_1">
      <PortfolioId>1335382</PortfolioId>
      <View>PL</View>
    </GetView_Request_1>
  </Body>
</Envelope>
```

Attribute	Description
validationMode	Sets the validation criterion for RICs. Possible values are: Tolerant - ignores invalid RICs and returns data for valid RICs. Strict - returns an error if a request contains an invalid RIC.
PortfolioID	Id of the portfolio to view.
View	The type of the View.

XML Sample Response - PL View

```
<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" s:mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/
    rkd/PortfolioTracker_1/GetView_1_Reply
    </a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetView_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/PortfolioTracker_1">
      <Portfolio xsi:type="PortfolioPLView" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
        <PortfolioName>portfolio1</PortfolioName>
        <CurrencyName>USD</CurrencyName>
        <Valccy>1148.72</Valccy>
        <Netccy>148.720096</Netccy>
        <Pctccy>61991.5039</Pctccy>
        <CashBalance>999.76</CashBalance>
        <Netday>-1.680</Netday>
        <Pctday>-1.11524165</Pctday>
        <Instrument>
          <RICName>IBM.N</RICName>
          <SecurityId>512975</SecurityId>
          <InstrumentName>INTL BUS MACHINE</InstrumentName>
          <Quantity>112</Quantity>
          <Prcnow>133</Prcnow>
          <Buyprc>0.214285</Buyprc>
          <Ccynew>100</Ccynew>
          <CcynewName>USD</CcynewName>
          <Ccybuy>100.03968</Ccybuy>
          <CcybuyName>USD</CcybuyName>
          <Netccy>148.720096</Netccy>
          <Pctccy>61991.503267974971</Pctccy>
        </Instrument>
      </Portfolio>
    </GetView_Response_1>
  </s:Body>
</s:Envelope>
```



```

    </Portfolio>
  </GetView_Response_1>
</Body>
</Envelope>

```

Attribute	Description
PortfolioName	The portfolio's name, chosen by the user.
CurrencyName	The portfolio's base currency, chosen by the user when creating the portfolio.
Valccy	The current value of the portfolio in base currency.
Netccy	The net change for the portfolio in base currency.
Pctccy	The percentage change for the portfolio in base currency.
CashBalance	The current value of the cash holding in base currency.
Netday	The net change for the portfolio in base currency on the current day.
Pctday	The percentage change for the portfolio in base currency on the current day.
Instrument	Contains instrument information for the current View. Contains the following elements: • RICName: The RIC (Reuters Instrument Code) that identifies the instrument. • SecurityId: A number between 1 and 75 that identifies the RIC within the portfolio • InstrumentName: The display name for the instrument. • Quantity: The current number of units of the instrument in the portfolio. • Buyprc: The average buy price for the instrument in its local trading currency. • Ccybuy: The average buy FX rate. • CcybuyName: The instrument's local trading currency. This is identical to ccynowName. • Prcnow: The current price of the instrument in its local trading currency. • Ccynow: The current FX rate between the instrument's local trading currency and the portfolio base currency. • CcynowName: The instrument's local trading currency. • Netccy: The net change of the instrument's value in the portfolio base currency, compared to its buy value. • Pctccy: The percent change of the instrument's value in the portfolio base currency, compared to its buy value.

32.10.3 Prices View

Use Pricers View to see the current prices of each instrument in the portfolio using standard exchange pricing fields.

XSD

XSD: http://api.rkd.reuters.com/schemas/PortfolioTracker/PortfolioTracker_1.xsd

XML Sample Request - Prices View

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/PortfolioTracker/PortfolioTracker.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/PortfolioTracker_1/GetView_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetView_Request_1 validationMode="Tolerant" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/PortfolioTracker_1">
      <PortfolioId>1335382</PortfolioId>
      <View>Prices</View>
    </GetView_Request_1>
  </Body>

```



```
</Envelope>
```

Attribute	Description
validationMode	Sets the validation criterion for RICs. Possible values are: • Tolerant - ignores invalid RICs and returns data for valid RICs. • Strict - returns an error if a request contains an invalid RIC.
PortfolioID	Id of the portfolio to view.
View	The type of the View.

XML Sample Response - Prices View

```
<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" s:mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/
rkd/PortfolioTracker_1/GetView_1_Reply
    </a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetView_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/PortfolioTracker_1">
      <Portfolio xsi:type="PortfolioPricesView" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
        <PortfolioName>portfolio1</PortfolioName>
        <CurrencyName>USD</CurrencyName>
        <Valccy>2344.66</Valccy>
        <Netccy>1344.90</Netccy>
        <Pctccy>0</Pctccy>
        <CashBalance>999.76</CashBalance>
        <Netday>-20.00</Netday>
        <Pctday>-1.46530879</Pctday>
        <Instrument>
          <RICName>IBM.N</RICName>
          <SecurityId>512975</SecurityId>
          <InstrumentName>INTL BUS MACHINE</InstrumentName>
          <Currency>USD</Currency>
          <Last>134.49</Last>
          <NetChg_1>-2</NetChg_1>
          <PctChg_1>-1.49</PctChg_1>
          <Bid>132.5</Bid>
          <Ask>133</Ask>
          <ACVol_1>313579550</ACVol_1>
        </Instrument>
        ...
      </Portfolio>
    </GetView_Response_1>
  </s:Body>
</Envelope>
```

Attribute	Description
PortfolioName	The portfolio's name, chosen by the user.
CurrencyName	The portfolio's base currency, chosen by the user when creating the portfolio.
Valccy	The current value of the portfolio in base currency.
Netccy	The net change for the portfolio in base currency.
Pctccy	The percentage change for the portfolio in base currency.
CashBalance	The current value of the cash holding in base currency.
Netday	The net change for the portfolio in base currency on the current day.
Pctday	The percentage change for the portfolio in base currency on the current day.
Instrument	Contains instrument information for the current View. Contains the following elements: • RICName: The RIC (Reuters Instrument Code) that identifies the instrument. • SecurityId: A number between 1 and 75 that identifies the RIC within the portfolio. • InstrumentName: The display name for the instrument.



- **Currency:** The instrument's local trading currency.
- **Last:** The instrument's last price.
- **NetChg_1:** The instrument's net change today.
- **PctChng_1:** The instrument's percent change today.
- **Bid:** The instrument's best bid.
- **Ask:** The instrument's best ask.
- **ACVol_1:** The instrument's today's volume.

32.10.4 Summary View

Use Summary View to see the most important portfolio information.

XSD

XSD: http://api.rkd.reuters.com/schemas/PortfolioTracker/PortfolioTracker_1.xsd

XML Sample Request - Summary View

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/PortfolioTracker/PortfolioTracker.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/PortfolioTracker_1/
      GetView_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetView_Request_1 validationMode="Tolerant" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/PortfolioTracker_1">
      <PortfolioId>1335382</PortfolioId>
      <View>Summary</View>
    </GetView_Request_1>
  </Body>
</Envelope>
```

Attribute	Description
validationMode	Sets the validation criterion for RICs. Possible values are: • Tolerant - ignores invalid RICs and returns data for valid RICs. • Strict - returns an error if a request contains an invalid RIC.
PortfolioID	Id of the portfolio to view.
View	The type of the View.

XML Sample Response - Summary View

```
<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" s:mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/
      rkd/PortfolioTracker_1/GetView_1_Reply
    </a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetView_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/PortfolioTracker_1">
      <Portfolio xsi:type="PortfolioSummaryView" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
        <PortfolioName>portfolio1</PortfolioName>
        <CurrencyName>USD</CurrencyName>
        <Valccy>2344.66</Valccy>
        <Netccy>1344.90</Netccy>
        <Pctccy>0</Pctccy>
        <CashBalance>999.76</CashBalance>
      </Portfolio>
    </GetView_Response_1>
  </s:Body>
</s:Envelope>
```



```

<Netday>-20.00</Netday>
<Pctday>-1.46530879</Pctday>
<Instrument>
  <RICName>IBM.N</RICName>
  <SecurityId>512975</SecurityId>
  <InstrumentName>INTL BUS MACHINE</InstrumentName>
  <Quantity>1000</Quantity>
  <Prcnow>134.49</Prcnow>
  <Valnow>134490.00</Valnow>
  <Ccynow>100</Ccynow>
  <CcynowName>USD</CcynowName>
  <Valccy>1344.90</Valccy>
  <Netccy>1344.90</Netccy>
  <Pctccy>0</Pctccy>
</Instrument>
...
</Portfolio>
</GetView_Response_1>
</Body>
</Envelope>

```

Attribute	Description
PortfolioName	The portfolio's name, chosen by the user.
CurrencyName	The portfolio's base currency, chosen by the user when creating the portfolio.
Valccy	The current value of the portfolio in base currency.
Netccy	The net change for the portfolio in base currency.
Pctccy	The percentage change for the portfolio in base currency.
CashBalance	The current value of the cash holding in base currency.
Netday	The net change for the portfolio in base currency on the current day.
Pctday	The percentage change for the portfolio in base currency on the current day.
Instrument	Contains instrument information for the current View. Contains the following elements: • RICName: The RIC (Reuters Instrument Code) that identifies the instrument. • SecurityId: A number between 1 and 75 that identifies the RIC within the portfolio. • InstrumentName: The display name for the instrument. • Quantity: The current number of units of the instrument in the portfolio. • Prcnow: The current price of the instrument in its local trading currency. • Valnow: The current value of the instrument in its local trading currency. • Ccynow: The current FX rate between the instrument's local trading currency and the portfolio base currency. • CcynowName: The instrument's local trading currency. • Valccy: The current value of the instrument in the portfolio base currency. • Netccy: The net change of the instrument's value in the portfolio base currency, compared to its buy value. • Pctccy: The percent change of the instrument's value in the portfolio base currency, compared to its buy value.

32.10.5 Valuation View

Use Valuation View to compare the instruments using standard valuations and see earnings and dividends.

XSD

XSD: http://api.rkd.reuters.com/schemas/PortfolioTracker/PortfolioTracker_1.xsd

XML Sample Request -Valuation View

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/PortfolioTracker/PortfolioTracker.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
  </Header>

```



```

<Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/PortfolioTracker_1/
  GetView_1</Action>
  <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
    <ApplicationID>[AppID]</ApplicationID>
    <Token>[Impersonation Token]</Token>
  </Authorization>
</Header>
<Body>
  <GetView_Request_1 validationMode="Tolerant" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/PortfolioTracker_1">
    <PortfolioId>1335382</PortfolioId>
    <View>Valuation</View>
  </GetView_Request_1>
</Body>
</Envelope>

```

Attribute	Description
validationMode	Sets the validation criterion for RICs. Possible values are: • Tolerant - ignores invalid RICs and returns data for valid RICs. • Strict - returns an error if a request contains an invalid RIC.
PortfolioID	Id of the portfolio to view.
View	The type of the View.

XML Sample Response - Valuation View

```

<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" s:mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/
      rkd/PortfolioTracker_1/GetView_1_Reply
    </a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetView_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/PortfolioTracker_1">
      <Portfolio>
        <PortfolioName>portfolio1</PortfolioName>
        <CurrencyName>USD</CurrencyName>
        <Valccy>2344.66</Valccy>
        <Netccy>1344.90</Netccy>
        <Pctccy>0</Pctccy>
        <CashBalance>999.76</CashBalance>
        <Netday>-20.00</Netday>
        <Pctday>-1.46530879</Pctday>
        <Instrument>
          <RICName>IBM.N</RICName>
          <SecurityId>512975</SecurityId>
          <InstrumentName>INTL BUS MACHINE</InstrumentName>
          <PERatio>0</PERatio>
          <Yield>4.625</Yield>
          <Earnings>-48.21</Earnings>
          <Dividend>6.22</Dividend>
          <DivPayDate>02 FEB 2007</DivPayDate>
          <ExDivDate>22 NOV 2006</ExDivDate>
        </Instrument>
        ...
      </Portfolio>
    </GetView_Response_1>
  </s:Body>
</Envelope>

```

Attribute	Description
PortfolioName	The portfolio's name, chosen by the user.
CurrencyName	The portfolio's base currency, chosen by the user when creating the portfolio.
Valccy	The current value of the portfolio in base currency.
Netccy	The net change for the portfolio in base currency.



Pctccy	The percentage change for the portfolio in base currency.
CashBalance	The current value of the cash holding in base currency.
Netday	The net change for the portfolio in base currency on the current day.
Pctday	The percentage change for the portfolio in base currency on the current day.
Instrument	Contains instrument information for the current View. Contains the following elements: • RICName: The RIC (Reuters Instrument Code) that identifies the instrument. • SecurityId: A number between 1 and 75 that identifies the RIC within the portfolio. • InstrumentName: The display name for the instrument. • PERatio: The instrument's PE ratio. • Yield: The instrument's dividend yield. • Earnings: The instrument's earnings per share. • Divident: The instrument's dividend per share. • DivPayDate: The instrument's dividend pay date. • ExDivDate: The instrument's ex-dividend date.

32.11 Client Portfolio View

If your users' real portfolios are held on your own systems, you may send a portfolio within a single request to the Thomson Reuters Knowledge Direct portfolio server for pricing and calculation, without Thomson Reuters storing any portfolio details. Each request is submitted to the portfolio server as a list of instruments and quantities, with a name and base currency, and the portfolio values are returned in XML format, giving you full flexibility in how you use the calculated portfolios.

Here TRKD is acting as a pricing engine, calculating instrument and portfolio values using the latest available prices and FX rates, and allowing integration with news.

XSD

XSD: http://api.rkd.reuters.com/schemas/PortfolioTracker/PortfolioTracker_1.xsd

XML Sample Request - Client Portfolio View

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/PortfolioTracker/PortfolioTracker.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/PortfolioTracker_1/GetClientPortfolioView_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetClientPortfolioView_Request_1 validationMode="Tolerant" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/PortfolioTracker_1">
      <PortfolioName>ZXCVB</PortfolioName>
      <Currency>GBP</Currency>
      <CashBalance>10000</CashBalance>
      <Description>Description text</Description>
      <View>Position</View>
      <Holdings>
        <Holding>
          <RICId>VOD.L</RICId>
          <DisplayName>VOD</DisplayName>
          <PersonalComments>Comment</PersonalComments>
          <Quantity>100</Quantity>
          <BuyPriceLocal>0</BuyPriceLocal>
          <BuyPriceBase>0</BuyPriceBase>
        </Holding>
        <Holding>
          <RICId>IBM.N</RICId>
          <DisplayName>IBM</DisplayName>
          <PersonalComments>Comment</PersonalComments>
          <Quantity>300</Quantity>
        </Holding>
      </Holdings>
    </GetClientPortfolioView_Request_1>
  </Body>
</Envelope>
```



```

    <BuyPriceLocal>0</BuyPriceLocal>
    <BuyPriceBase>0</BuyPriceBase>
  </Holding>
</Holding>
  <RICId>MSFT.OL</RICId>
  <DisplayName>Microsoft</DisplayName>
  <PersonalComments>Comment</PersonalComments>
  <Quantity>600</Quantity>
  <BuyPriceLocal>0</BuyPriceLocal>
  <BuyPriceBase>0</BuyPriceBase>
</Holding>
</Holdings>
</GetClientPortfolioView_Request_1>
</Body>
</Envelope>

```

Attribute	Description
validationMode	Sets the validation criterion for RICs. Possible values are: • Tolerant - ignores invalid RICs and returns data for valid RICs. • Strict - returns an error if a request contains an invalid RIC.
PortfolioName	The portfolio's name, chosen by the user.
Currency	The portfolio's base currency, chosen by the user when creating the portfolio.
CashBalance	The current value of the cash holding in base currency.
Description	Optional text describing the Portfolio.
View	Defines what information will be returned. See section Retrieving Portfolio Views on information and a listing of all possible views.
Holdings	Contains a list of one or multiple holdings to be analyzed.
Holding	The following information should be contained in each holding entered. Contains the following elements: • RICId: The RIC (Reuters Instrument Code) that identifies the instrument. • DisplayName: The display name for the instrument. • PersonalComments: A comment regarding this instrument. • Quantity: The current number of units of the instrument in the portfolio. • BuyPriceLocal: Specifies the buy price of the security in its local currency. • BuyPriceBase: Specifies the buy price of the security in the portfolio's base currency.

XML Sample Response - Client Portfolio View

```

<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" s:mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/
webservices/rkd/PortfolioTracker_1/GetClientPortfolioView_1_Reply</a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetClientPortfolioView_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/PortfolioTracker_1">
      <Portfolio xsi:type="PortfolioPositionView" >
        <PortfolioName>ZXCVB</PortfolioName>
        <CurrencyName>GBP</CurrencyName>
        <Valccy>26580.559763883</Valccy>
        <Netccy>7480.559763883</Netccy>
        <Pctccy>82.20396</Pctccy>
        <CashBalance>10000</CashBalance>
        <Description>Description text</Description>
        <Netday>-209.474671100</Netday>
        <Pctday>-1.24761307</Pctday>
        <CashWeight>37.62148</CashWeight>
        <Weight>100</Weight>
        <Instrument>
          <RICName>VOD.L</RICName>
          <SecurityId>1</SecurityId>
          <InstrumentName>VOD</InstrumentName>
          <Quantity>100</Quantity>
        </Instrument>
      </Portfolio>
    </GetClientPortfolioView_Response_1>
  </s:Body>
</s:Envelope>

```



```
<Prcnow>134.49</Prcnow>
<Valnow>13449.00</Valnow>
<Ccynow>100</Ccynow>
<CcynowName>GBP</CcynowName>
<Valccy>134.49</Valccy>
<Weight>0.5059713</Weight>
</Instrument>
<Instrument>
  <RICName>IBM.N</RICName>
  <SecurityId>2</SecurityId>
  <InstrumentName>IBM</InstrumentName>
  <Quantity>300</Quantity>
  <Prcnow>90.62</Prcnow>
  <Valnow>27186.00</Valnow>
  <Ccynow>1.97995</Ccynow>
  <CcynowName>USD</CcynowName>
  <Valccy>13730.649763883</Valccy>
  <Weight>51.65674</Weight>
</Instrument>
<Instrument>
  <RICName>MSFT.O</RICName>
  <SecurityId>3</SecurityId>
  <InstrumentName>Microsoft</InstrumentName>
  <Quantity>600</Quantity>
  <Prcnow>452.57</Prcnow>
  <Valnow>271542.00</Valnow>
  <Ccynow>100</Ccynow>
  <CcynowName>USD</CcynowName>
  <Valccy>2715.42</Valccy>
  <Weight>10.2158117</Weight>
</Instrument>
</Portfolio>
</GetClientPortfolioView_Response_1>

</Body>
</Envelope>
```

The response is a Position View based on the information provided in the request. For more information on Views and fields they contain see section Retrieving Portfolio Views.



chapter 33 Profiles

The Thomson Reuters Profiles service allows users to store their broker research search criteria (referred to as "profiles" or "stored searches") in Thomson Reuters database. These search criteria may be retrieved at any time by their ID, so you won't have to enter them once again. You can also enable an e-mail alert to notify you when a document matching your criteria is contributed.

For real-time broker research queries see section Document Search.

By using this service you can retrieve, create, delete, reset and update your profile.

The following operations are available:

- **Create Profile (CreateProfile_1)** - creates a profile for a user.
- **Delete Profile (DeleteProfile_1)** - deletes a profile.
- **Get Profile (GetProfile_1)** - retrieves information about a particular profile.
- **Get Profile Email (GetProfileEmail_1)** - retrieves the e-mail from a particular profile.
- **Get Profile Schedule (GetProfileSchedule_1)** - retrieves schedule for a particular profile.
- **Get User Profiles (GetUserProfiles_1)** - retrieves user profiles.
- **Get Use Template (GetUseTemplate_1)** - shows the format (template) used for the alert e-mail.
- **Set Alert Type (SetAlertType_1)** - enables/disables alerts for a profile.
- **Set Profile Email (SetProfileEmail_1)** - sets the e-mail address to send alerts to.
- **Set Profile Schedule (SetProfileSchedule_1)** - schedules the alert for a particular profile.
- **Set Use Template (SetUseTemplate_1)** - sets the format (template) to be used for the alert e-mail.
- **Update Profile (UpdateProfile_1)** - updates the profile information by its ID.

33.1 Authentication/Authorization, Service Endpoint, and Required Headers

Authorization

All requests to the Thomson Reuters Profiles service require an authorization token. For details, see section Understanding Authentication Tokens.

Authentication

Thomson Reuters Profiles uses Reuters impersonation tokens for each effective user. In this case, Thomson Reuters must create each user before your application authenticates them. Unmanaged effective users are not supported in Thomson Reuters Profiles.

For additional information, see section Creating a Token.

Service Endpoint

Thomson Reuters Profiles Endpoint

`http://api.rkd.reuters.com/api/Profiles/Profiles.svc`

Required Header

Required HTTP Headers

POST /api/Profiles/Profiles.svc HTTP/1.1
 Content-Type: application/soap+xml
 Host: api.rkd.reuters.com
 Content-Length: [length]



33.2 WSDL

WSDL:

http://api.rkd.reuters.com/schemas/Profiles/wsdl/Profiles_1_HttpAndRKDTOKEN.wsdl

33.3 Create Profile (CreateProfile_1)

The CreateProfile_1 request creates a profile for a user.

The following example creates a profile with the name 'testProfile'. Its type is 'profile', alerts are enabled and they will be sent at 5 a.m. and 5 p.m. It also contains document search criteria which can be transformed into a DocSearch request retrieving documents from new submissions having 'Auto' in their headline.

XML Sample Request - Creating Profile

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Profiles/Profiles.svc/Anonymous</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/Profiles_1/
    CreateProfile_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <CreateProfile_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Profiles_1">
      <Profile profileName="testProfile" profileType="profile" alertType="E" schedule="000001000000000001000000">
        <ProfileString dateRange="newSubmissions" maxRows="100" ppv="all" tkrEncoding="tkr" tkrPrimary="true" acceptLanguage="en"
        calcPrice="false" synCharsRequired="0">
          <sort s_d="desc" s_c="score"/>
          <country>USA</country>
          <matchStr strSrc="hdln" relevance="100">Auto</matchStr>
        </ProfileString>
        <email>test@reuters.com</email>
      </Profile>
    </CreateProfile_Request_1>
  </Body>
</Envelope>
```

Note: The value of the 'email' attribute is limited to 255 characters.

Attribute	Description
profileID	ID of the profile (This attribute is ignored in the CreateProfile_1 operation).
profileName	Name of the profile. Note: This value is limited to 32 characters.
profileType	Type of the profile. Can have the following values: • profile • portfolio
alertType	Enables/disables the alert.
schedule	Sets alert schedule. Default value is '1000000000000000000000' (real-time). A "1" in the first position indicates real time; a "1" in any other position indicates an hour in the 24 hour period.
ProfileString	A set of attributes and elements containing search criteria. Each value of 'ProfileString' is limited to 255 characters. You can use the same attributes and elements as in the Document Search requests, with one exception: to include or exclude contributors, use <excludeCtbs> and <ctbs>, rather than <ctbsm>. That's because currently <ctbsm> does not provide any additional functionality - it does not support the selection of contributor categories (Brokers or Independents). Also please note that if you use both <ctbs> and <ctbsm>, they both must follow the "include" logic or "exclude" logic.



Note: For more information on Document Search criteria and Document Search requests see section Document Search.

Keep in mind that a profile with the only criteria "docType" is considered too generic by the application. The profiler ignores profiles with too broad criteria.

The response returns the unique ID of the created profile:

XML Sample Response - Creating Profile

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/01/12/webservices/
      rkd/Profiles_1/CreateProfile_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <CreateProfile_Response_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Profiles_1">
      <ProfileID>881809</ProfileID>
    </CreateProfile_Response_1>
  </Body>
</Envelope>
```

33.4 Delete Profile (DeleteProfile_1)

The DeleteProfile_1 request deletes a user profile.

The following example deletes user profile with ID '881631'.

XML Sample Request - Deleting Profile

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Profiles/Profiles.svc/Anonymous</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/Profiles_1/
      DeleteProfile_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <DeleteProfile_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Profiles_1">
      <ProfileID>881631</ProfileID>
    </DeleteProfile_Request_1>
  </Body>
</Envelope>
```

The response returns the following:

XML Sample Response - Deleting Profile

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/01/12/webservices/
      rkd/Profiles_1/DeleteProfile_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <DeleteProfile_Response_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Profiles_1"/>
  </Body>
</Envelope>
```



```
</Body>
</Envelope>
```

33.5 Get Profile (GetProfile_1)

The GetProfile_1 request retrieves information about a particular profile of a user.

The following example retrieves information about a profile with Profile ID '881790'.

XML Sample Request - Retrieving Profile

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Profiles/Profiles.svc/Anonymous</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/Profiles_1/GetProfile_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetProfile_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Profiles_1">
      <ProfileID>881790</ProfileID>
    </GetProfile_Request_1>
  </Body>
</Envelope>
```

The response returns the following information:

XML Sample Response - Deleting Profile

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/01/12/webservices/rkd/Profiles_1/GetProfile_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <GetProfile_Response_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Profiles_1">
      <Profile profileID="881790" profileName="testProfileUpdated" profileType="profile" alertType=""
        schedule="00000100000000000010000000">
        <ProfileString tkrPrimary="true">
          <sort />
          <ticker>IBM=US</ticker>
          <country>USA</country>
        </ProfileString>
      </Profile>
    </GetProfile_Response_1>
  </Body>
</Envelope>
```

Attribute	Description
profileID	ID of the profile.
profileName	Name of the profile.
profileType	Type of the profile.
alertType	Type of the alert.
schedule	Shows alert schedule.
ProfileString	A set of attributes and elements containing search criteria.



33.6 Get Profile Email (GetProfileEmail_1)

The GetProfileEmail_1 request retrieves the e-mail from a particular user profile.

The following example retrieves the e-mail from a profile with Profile ID '881790'.

XML Sample Request - Retrieving Profile E-mail

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Profiles/Profiles.svc/Anonymous</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/Profiles_1/GetProfileEmail_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetProfileEmail_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Profiles_1">
      <ProfileID>881790</ProfileID>
    </GetProfileEmail_Request_1>
  </Body>
</Envelope>
```

The response returns the following information:

XML Sample Response - Retrieving Profile E-mail

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/01/12/webservices/rkd/Profiles_1/GetProfileEmail_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <GetProfileEmail_Response_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Profiles_1">
      <email>test@reuters.com</email>
    </GetProfileEmail_Response_1>
  </Body>
</Envelope>
```

33.7 Get Profile Schedule (GetProfileSchedule_1)

The GetProfileSchedule_1 request retrieves schedule for a particular user profile.

The following example retrieves schedule for the profile with ID '881790'.

XML Sample Request - Retrieving Profile Schedule

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Profiles/Profiles.svc/Anonymous</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/Profiles_1/GetProfileSchedule_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Common_1">
```




```

    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <GetUserProfiles_Response_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Profiles_1">
      <Profile profileID="881826" profileName="testProfile2" profileType="profile" alertType="E"
        schedule="000001000000000001000000">
        <ProfileString dateRange="newSubmissions" maxRows="100" ppv="all" tkrEncoding="tkr" tkrPrimary="true" acceptLanguage="en"
          calcPrice="false" synCharsRequired="0">
          <sort s_d="desc" s_c="score"/>
          <country>USA</country>
          <matchStr relevance="100" strSrc="hdln">Auto</matchStr>
        </ProfileString>
        <email>fake1@reuters.com</email>
      </Profile>
      <Profile profileID="881827" profileName="testProfile2" profileType="profile" alertType="E"
        schedule="000001000000000001000000">
        <ProfileString dateRange="newSubmissions" exclude3rdParty="false" maxRows="100" ppv="all" tkrEncoding="tkr"
          tkrPrimary="true">
          <sort s_d="desc" s_c="score"/>
          <ticker>IBM=US</ticker>
          <ticker>MSFT=US</ticker>
        </ProfileString>
        <email>test1@email.com</email>
        <email>test2@email.com</email>
      </Profile>
    </GetUserProfiles_Response_1>
  </Body>
</Envelope>

```

Attribute	Description
profileID	ID of the profile.
profileName	Name of the profile.
profileType	Type of the profile.
alertType	Type of the alert.
schedule	Shows alert schedule.
ProfileString	A set of attributes and elements containing search criteria.

33.9 Get Use Template (GetUseTemplate_1)

The GetUseTemplate_1 shows the format (template) of the alert email.

The following example retrieves use template:

XML Sample Request - Retrieving Use Template
<pre> <Envelope xmlns="http://www.w3.org/2003/05/soap-envelope"> <Header> <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Profiles/Profiles.svc/Anonymous</To> <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID> <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/Profiles_1/ GetUseTemplate_1</Action> <Authorization xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Common_1"> <ApplicationID>[AppID]</ApplicationID> <Token>[service token]</Token> </Authorization> </Header> <Body> <GetUseTemplate_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Profiles_1"/> </Body> </Envelope> </pre>

The response returns the following information:



XML Sample Response - Retrieving Use Template

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/01/12/webservices/rkd/Profiles_1/GetUseTemplate_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <GetUseTemplate_Response_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Profiles_1">
      <Use>RKD_API</Use>
    </GetUseTemplate_Response_1>
  </Body>
</Envelope>

```

Note: You can work with your Thomson Reuters project manager to design an appropriate template for your application.

33.10 Set Alert Type (SetAlertType_1)

The SetAlertType_1 request enables/disables alerts for a particular profile.

The following example enables alerts for the profile with ID '881790'.

XML Sample Request - Setting Alert Type

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Profiles/Profiles.svc/Anonymous</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/Profiles_1/SetAlertType_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <SetAlertType_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Profiles_1">
      <ProfileID>881790</ProfileID>
      <AlertType>E</AlertType>
    </SetAlertType_Request_1>
  </Body>
</Envelope>

```

To enable alerts for a stored query, set the <AlertType> attribute to "E", to disable set the <AlertType> attribute to "".

The response returns the following information:

XML Sample Response - Setting Alert Type

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/01/12/webservices/rkd/Profiles_1/SetAlertType_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <SetAlertType_Response_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Profiles_1"/>
  </Body>
</Envelope>

```



33.11 Set Profile Email (SetProfileEmail_1)

The SetProfileEmail_1 request allows the user to set the e-mail address to send alerts to when a document is contributed that matches the criteria in that user's stored query.

The following example sets the e-mail address for the profile with ID '881790'.

XML Sample Request - Setting Profile Email

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Profiles/Profiles.svc/Anonymous</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/Profiles_1/SetProfileEmail_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <SetProfileEmail_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Profiles_1">
      <ProfileID>881790</ProfileID>
      <email>user.name@thomsonreuters.com</email>
    </SetProfileEmail_Request_1>
  </Body>
</Envelope>
```

Note: When setting new e-mail(s), keep in mind that new values overwrite existing.

The response returns the following information:

XML Sample Response - Setting Profile Email

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/01/12/webservices/rkd/Profiles_1/SetProfileEmail_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <SetProfileEmail_Response_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Profiles_1" />
  </Body>
</Envelope>
```

33.12 Set Profile Schedule (SetProfileSchedule_1)

The SetProfileSchedule_1 request schedules the alert for a particular profile.

The following example schedules the alert to be sent at 10.00, 11.00, 12.00, 13.00 and 14.00 for the profile with ID '881790'.

XML Sample Request - Setting Profile Schedule

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Profiles/Profiles.svc/Anonymous</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/Profiles_1/SetProfileSchedule_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Common_1">
```



```

    <ApplicationID>[AppID]</ApplicationID>
    <Token>[service token]</Token>
  </Authorization>
</Header>
<Body>
  SetProfileSchedule_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Profiles_1">
    <ProfileID>881790</ProfileID>
    <Schedule>0000000000111110000000000</Schedule>
  </SetProfileSchedule_Request_1>
</Body>
</Envelope>

```

A "1" in the first position indicates real time; a "1" in any other position indicates an hour in the 24 hour period.

Note: To create a real-time alert, set the <Schedule> attribute to '100000000000000000000000'.

The response returns the following information:

XML Sample Response - Setting Profile Schedule

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/01/12/webservices/rkd/Profiles_1/SetProfileSchedule_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <SetProfileSchedule_Response_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Profiles_1" />
  </Body>
</Envelope>

```

33.13 Set Use Template (SetUseTemplate_1)

The SetUseTemplate_1 request sets the format (template) to be used for the alert e-mail.

To enable the functionality of getting alerts you should use the SetUseTemplate_1 request on behalf of an effective user with the parameter <Use>RKD_API</Use>. 'RKD_API' is the default value.

The following request should be sent to the Profiles service:

XML Sample Request - Setting Use Template

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Profiles/Profiles.svc/Anonymous</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/Profiles_1/SetUseTemplate_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <SetUseTemplate_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Profiles_1">
      <Use>RKD_API</Use>
    </SetUseTemplate_Request_1>
  </Body>
</Envelope>

```

The response returns the following information:

XML Sample Response - Setting Use Template

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/01/12/webservices/rkd/Profiles_1/SetUseTemplate_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <SetUseTemplate_Response_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Profiles_1"/>
  </Body>
</Envelope>

```

33.14 Update Profile (UpdateProfile_1)

The UpdateProfile_1 request updates the profile information by its ID.

The following example updates the profile with ID '881790'.

XML Sample Request - Updating Profile

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Profiles/Profiles.svc/Anonymous</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/Profiles_1/UpdateProfile_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <UpdateProfile_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Profiles_1">
      <Profile profileID="881790" profileName="testProfileUpdated" alertType="" schedule="000001000000000001000000">
        <ProfileString dateRange="newSubmissions" maxRows="100" ppv="all" tkrEncoding="tkr" tkrPrimary="true" acceptLanguage="en" calcPrice="false" synCharsRequired="0">
          <sort s_d="desc" s_c="score"/>
          <country>USA</country>
          <ticker>IBM=US</ticker>
        </ProfileString>
        <email>fake_Updated@reuters.com</email>
      </Profile>
    </UpdateProfile_Request_1>
  </Body>
</Envelope>

```

For more information on profile attributes see section Create Profile (CreateProfile_1).

Note: When updating profile with new information, keep in mind that all profile's attributes (except profileID) and elements you submit overwrite existing.

The response returns the following information:

XML Sample Response - Updating Profile

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/01/12/webservices/rkd/Profiles_1/UpdateProfile_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <UpdateProfile_Response_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Profiles_1">
      <Profile profileID="881790" profileName="testProfileUpdated" alertType="" schedule="000001000000000001000000">
        <ProfileString dateRange="newSubmissions" maxRows="100" ppv="all" tkrEncoding="tkr" tkrPrimary="true" acceptLanguage="en" calcPrice="false" synCharsRequired="0">
          <sort s_d="desc" s_c="score"/>
          <country>USA</country>
          <ticker>IBM=US</ticker>
        </ProfileString>
        <email>fake_Updated@reuters.com</email>
      </Profile>
    </UpdateProfile_Response_1>
  </Body>
</Envelope>

```



```

</Header>
<Body>
  <UpdateProfile_Response_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Profiles_1"/>
</Body>
</Envelope>

```

33.15 Mapping from Document Search Set Code to Profile Set Code

In general, the Profiles service (and particularly alerts generator) understands contributor (local) codes. Some search criteria's (like industries, subjects, categories) can be specified in the Profiles service in both variants: local (then Set code should be specified) or global codes. But the Profiles service requires **only** Multex (global) codes for the following exceptional cases: **analyst**, **currency**, and **country** values. **Currency** and **country** are always used in global codes, so there is no need to convert them specially for the Profiles service, but if a site operates with local **analyst** codes they must be mapped into global (Multex) codes by using the Authors Reference service and then saved in profiles.

The following example shows how to get global code using local **author** code for saving it in a profile.

Use the AuthorsList_1 request to get global code of Lehman Brothers (contributor id 10333) analyst John L Butler (local code is LB01154):

XML Sample

```

<AuthorsList_Request_1 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Authorsref_1">
  <authorSearchCriterion>
    <basicSearch />
    <contribStringsSearch contributionString="LB01154" ctbID="10333" />
  </authorSearchCriterion>
</AuthorsList_Request_1>

```

Response returns global code (in bold):

XML Sample

```

<AuthorsList_Response_1 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/Authorsref_1">
  <author uid="30135425" authorCode="3AMJ"/>
</AuthorsList_Response_1>

```

The following set codes must be converted for alerts generator **before** saving to profile (analystSet is not to be converted, because it is not processed by alert generator and authors codes should be converted instead as specified above):

- **subjectSet;**
- **regionSet;**
- **industrySet;**
- **categorySet.**

To map a Document Search set code to a Profile Set Code, use the following algorithm of conversion ("MX#001" -> "001" -> 1 -> "1"):

1. Select a number after "#" ("MX#001" -> "001");
2. Convert it to an integer ("001" -> 1);
3. Store it in a profile as a string (1 -> "1")

Note: For more information on local/global codes see sections Using Reuters (Global) Codes and Using Contributor (Local) Codes.

33.16 Alerts Return ctSubjectsResp Different from ctsubjects in Created Profiles

In Thomson Reuters Profiles, the returned alerts may contain "ctSubjectsResp" different from "ctsubjects" in created profiles:

- alert with ctSubjectsResp=MXAGCM returns to Profile with ctsubjects=MXCMAG (ctSubjectsCodes=120000001);
- alert with ctSubjectsResp=MXASFI returns to Profile with ctsubjects=MXFIAS (ctSubjectsCodes=120000002);
- alert with ctSubjectsResp=MXBCEC returns to Profile with ctsubjects=MXECBC (ctSubjectsCodes=120000003);
- alert with ctSubjectsResp=MXBREC returns to Profile with ctsubjects=MXECBR (ctSubjectsCodes=120000004);
- alert with ctSubjectsResp=MXCPIN returns to Profile with ctsubjects=MXINCP (ctSubjectsCodes=120000024);
- alert with ctSubjectsResp=MXMFTT returns to Profile with ctsubjects=MXTTMF (ctSubjectsCodes=120000049);
- alert with ctSubjectsResp=MXAQCO returns to Profile with ctsubjects=MXCOAQ (ctSubjectsCodes=120000055);

It is a designed behavior and the pairs of IC subjects listed above are completely equivalent (f.e. there is no difference between Multex Agriculture Commodity (MXAGCM) and Multex Commodity Agriculture (MXCMAG), the meaning of those two subjects is completely the same). String values are combined from several abbreviations: MX - Multex - is general for all; other 2-letter abbreviations mean the respective subjects:

You can get the explanations for those 2-letter abbreviations using the Reference Information service. For example:

- AG - Agriculture;
- CM - Commodity.



chapter 34 Purchase History

This chapter describes how to use the Thomson Reuters Knowledge Direct API to retrieve purchase history for documents for particular date range.

The following operations are available in the Thomson Reuters Purchase History service:

- **Get Purchase History** (GetPurchaseHistory_1) - retrieves the purchase history for effective user.
- **Get Purchase History Admin** (GetPurchaseHistoryAdmin_1) - retrieves the purchase history for any user in a channel.

34.1 Authentication/Authorization, Service Endpoint, and Required Headers

Authorization

All requests to the Thomson Reuters Purchase History service require an authorization token. For details, see section Understanding Authentication Tokens.

Authentication

Thomson Reuters Purchase History uses Reuters impersonation tokens for each effective user. In this case, Thomson Reuters must create each user before your application authenticates them. Unmanaged effective users are not supported in Thomson Reuters Purchase History.

For additional information, see section Creating a Token.

Service Endpoint

Thomson Reuters Purchase History Endpoint

<http://api.rkd.reuters.com/api/PurchaseHistory/PurchaseHistory.svc>

Required Header

Required HTTP Headers

POST /api/PurchaseHistory/PurchaseHistory.svc HTTP/1.1
Content-Type: application/soap+xml
Host: api.rkd.reuters.com
Content-Length: [length]

34.2 WSDL

WSDL:

http://api.rkd.reuters.com/schemas/PurchaseHistory/wSDL/PurchaseHistory_1_HttpAndRKDToken.wsdl

34.3 Get Purchase History (GetPurchaseHistory_1)

Use the GetPurchaseHistory_1 request to get purchase history for a particular date range.

The example below retrieves purchase history for the period from 02/01/2007 to 12/24/2009:

XML Sample Request - Retrieving Purchase History

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/PurchaseHistory/PurchaseHistory.svc/Anonymous</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/10/01/webservices/rkd/PurchaseHistory_1/GetPurchaseHistory_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetPurchaseHistory_Request_1 xmlns="http://www.reuters.com/ns/2009/10/01/webservices/rkd/PurchaseHistory_1" toDate="2009-12-24T00:00:00Z" fromDate="2007-02-01T00:00:00Z"></GetPurchaseHistory_Request_1>
  </Body>
</Envelope>

```

The response returns the following information:

XML Sample Response - Retrieving Purchase History

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2009/10/01/webservices/rkd/PurchaseHistory_1/GetPurchaseHistory_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <GetPurchaseHistory_Response_1 xmlns="http://www.reuters.com/ns/2009/10/01/webservices/rkd/PurchaseHistory_1">
      <getPurchaseHistoryRecord Page="10" companyName="Centrum Broking Private Limited" ctbID="47524" docID="44620408" fileExt="PDF " price="1000" purchaseDate="2009-12-22T15:33:31">
        <headline>Zee News - Initiating Coverage - Accumulate</headline>
        <referenceCode></referenceCode>
      </getPurchaseHistoryRecord>
      <getPurchaseHistoryRecord Page="-1" companyName="Centrum Broking Private Limited" ctbID="47524" docID="44620408" fileExt="PDF " price="100" purchaseDate="2009-12-22T13:04:49">
        <headline>Zee News - Initiating Coverage - Accumulate</headline>
        <referenceCode></referenceCode>
      </getPurchaseHistoryRecord>
      <getPurchaseHistoryRecord Page="-1" companyName="BofA Merrill Lynch" ctbID="57030" docID="47183933" fileExt="PDF " price="75000" purchaseDate="2009-12-16T12:21:17">
        <headline>European Morning Credit</headline>
        <referenceCode></referenceCode>
      </getPurchaseHistoryRecord>
      <getPurchaseHistoryRecord Page="-1" companyName="BofA Merrill Lynch" ctbID="57030" docID="47183933" fileExt="PDF " price="75000" purchaseDate="2009-12-16T12:21:17">
        <headline>European Morning Credit</headline>
        <referenceCode></referenceCode>
      </getPurchaseHistoryRecord>
      <getPurchaseHistoryRecord Page="-1" companyName="Plunkett Research, Ltd." ctbID="14899" docID="46366411" fileExt="PDF " price="1990000" purchaseDate="2009-12-15T16:31:08">
        <headline>Airline, Hotel & Travel Industry Trends, Statistics & Analysis 2010 (Summary)</headline>
        <referenceCode></referenceCode>
      </getPurchaseHistoryRecord>
    </GetPurchaseHistory_Response_1>
  </Body>
</Envelope>

```

Attribute	Description
headline	The headline of the purchased document.
referenceCode	(Optional) Reference code.



34.4 Get Purchase History Admin (GetPurchaseHistoryAdmin_1)

Use the GetPurchaseHistoryAdmin_1 request to get purchase history for a particular user for a particular date range.

The example below retrieves purchase history for the period from 02/01/2007 to 12/24/2009:

XML Sample Request - Retrieving Purchase History Admin

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/PurchaseHistory/PurchaseHistory.svc/Anonymous</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/10/01/webservices/rkd/PurchaseHistory_1/GetPurchaseHistoryAdmin_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetPurchaseHistoryAdmin_Request_1 xmlns="http://www.reuters.com/ns/2009/10/01/webservices/rkd/PurchaseHistory_1"
      toDate="2009-12-24T00:00:00Z" fromDate="2007-02-01T00:00:00Z">
      <userIdentity>
        <cid_uid>
          <companyID>30373</companyID>
          <ID>32188593</ID>
        </cid_uid>
      </userIdentity>
    </GetPurchaseHistoryAdmin_Request_1>
  </Body>
</Envelope>
```

Element	Value
User Identity	Defines user identity. Can be: - alias (user alias - f.e. user's e-mail); - companyID (Company ID) + ID (user ID)

The response returns the following information:

XML Sample Response - Retrieving Purchase History Admin

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2009/10/01/webservices/rkd/PurchaseHistory_1/GetPurchaseHistoryAdmin_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <GetPurchaseHistoryAdmin_Response_1 xmlns="http://www.reuters.com/ns/2009/10/01/webservices/rkd/PurchaseHistory_1">
      <getPurchaseHistoryRecord Page="10" companyName="Centrum Broking Private Limited" ctbID="47524" docID="44620408"
        fileExt="PDF" price="1000" purchaseDate="2009-12-22T15:33:31">
        <headline>Zee News - Initiating Coverage - Accumulate</headline>
        <referenceCode></referenceCode>
      </getPurchaseHistoryRecord>
      <getPurchaseHistoryRecord Page="-1" companyName="Centrum Broking Private Limited" ctbID="47524" docID="44620408"
        fileExt="PDF" price="100" purchaseDate="2009-12-22T13:04:49">
        <headline>Zee News - Initiating Coverage - Accumulate</headline>
        <referenceCode></referenceCode>
      </getPurchaseHistoryRecord>
      <getPurchaseHistoryRecord Page="-1" companyName="BofA Merrill Lynch" ctbID="57030" docID="47183933" fileExt="PDF"
        price="75000" purchaseDate="2009-12-16T12:21:17">
        <headline>European Morning Credit</headline>
        <referenceCode></referenceCode>
      </getPurchaseHistoryRecord>
      <getPurchaseHistoryRecord Page="-1" companyName="BofA Merrill Lynch" ctbID="57030" docID="47183933" fileExt="PDF">
      </getPurchaseHistoryRecord>
    </GetPurchaseHistoryAdmin_Response_1>
  </Body>
</Envelope>
```



```

price="75000" purchaseDate="2009-12-16T12:21:17">
  <headline>European Morning Credit</headline>
  <referenceCode></referenceCode>
</getPurchaseHistoryRecord>
<getPurchaseHistoryRecord Page="-1" companyName="Plunkett Research, Ltd." ctbID="14899" docID="46366411" fileExt="PDF"
price="1990000" purchaseDate="2009-12-15T16:31:08">
  <headline>Airline, Hotel & Travel Industry Trends, Statistics & Analysis 2010 (Summary)</headline>
  <referenceCode></referenceCode>
</getPurchaseHistoryRecord>
</GetPurchaseHistoryAdmin_Response_1>

</Body>
</Envelope>

```

Attribute	Description
headline	The headline of the purchased document.
referenceCode	(Optional) This parameter is usually saved as client data in purchase records or in usage records, when clients buy some documents. In case document is embargoed , a purchase record is created, and in case document is real-time or embargoed , a usage record is made by the backend, to which reference ID is passed in ClientData header. Then, when you send a request to GetPurchaseHistory_1, this referenceCode is returned in response.



chapter 35 Quote Chains

The TRKD API QuoteChains_1 service is dedicated to chains processing. The service allows data retrieval using a single chain RIC.

The QuoteChains_1 service has a number of advantages as compared to the Quotes_1 service:

- It is optimized for chains processing and offers higher service quality.
- It allows partial chain retrieval, which is especially useful for big chains.

35.1 Authentication/Authorization, Service Endpoint, and Required Headers

Authorization

All requests to the QuoteChains web service require an authorization token. For details, see section Understanding Authentication Tokens.

Authentication

In most implementations, QuoteChains service uses unmanaged impersonation tokens for each effective user. In this case, it is up to your application to supply (and otherwise manage) a unique identifier for each user; Thomson Reuters does not manage the user identities.

QuoteChains service also supports Reuters impersonation tokens for each effective user. In this case, Thomson Reuters must create each user before your application authenticates them.

For additional information, see section Creating a Token for more information on creating a Service Token.

Service Endpoint

QuoteList Endpoint

<http://api.rkd.reuters.com/api/QuoteChains/QuoteChains.svc>

Required Header

Required HTTP Headers

POST /api/QuoteChains/QuoteChains.svc HTTP/1.1
Content-Type: application/soap+xml
Host: api.rkd.reuters.com
Content-Length: [length]

35.2 WSDL

WSDL:

http://api.rkd.reuters.com/schemas/QuoteChains/wsd/QuoteChains_1_HttpAndRKDToken.wsdl

35.3 Get Chain Components (GetChainComponents_1)

The GetChainComponents_1 operation returns the chain components in a paged fashion, thus allowing the client to use Quotes.RetrieveItem_3 to get data for the specific list of RICs rather than the full chain.

The following example requests child items from 11 to 20 of the 0#.DJI chain:

XML Sample Request - Get Chain Components

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/QuoteChains/QuoteChains.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2012/05/07/webservices/rkd/QuoteChains_1/GetChainComponents_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetChainComponents_Request_1 xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://www.reuters.com/ns/2012/02/02/webservices/rkd/QuoteChains_1">
      <Instrument>0#.DJI</Instrument>
      <Parameters>
        <Paging Page="2" PageSize="10" />
      </Parameters>
    </GetChainComponents_Request_1>
  </Body>
</Envelope>

```

Parameter	Description
Instrument	Chain RIC (mandatory parameter).
Page	Page number. If this parameter is not specified in the request, the first page is returned.
PageSize	Size of each page. The default Page Size is 15. Available values are: 5, 10, 25, 50, and 100.

The response returns child items from 11 to 20 of the 0#.DJI chain:

XML Sample Response - Get Chain Components

```

<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" s:mustUnderstand="1"> http://www.reuters.com/ns/2012/05/07/webservices/rkd/QuoteChains_1/GetChainComponents_1_Reply</a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetChainComponents_Response_1 xmlns="http://www.reuters.com/ns/2012/02/02/webservices/rkd/QuoteChains_1">
      <PagingDetails instrumentsCount="10">
        <Prev>1</Prev>
        <Current>2</Current>
        <Next>3</Next>
      </PagingDetails>
      <Components>
        <Component>HD.N</Component>
        <Component>MCD.N</Component>
        <Component>TRV.N</Component>
        <Component>BAC.N</Component>
        <Component>HPQ.N</Component>
        <Component>MMM.N</Component>
        <Component>UTX.N</Component>
        <Component>CAT.N</Component>
        <Component>IBM.N</Component>
        <Component>MRK.N</Component>
      </Components>
    </GetChainComponents_Response_1>
  </s:Body>
</Envelope>

```

Parameter	Description
PagingDetails	This section contains following information:



	• Prev - previous page number • Current - current page number • Next - next page number If there's no previous and/or next page, the Prev and/or Next elements are empty.
instrumentsCount	The number of constituents in the response.
Component	RICs of the chain constituents.

35.4 Get Chain (GetChain_1)

The GetChain_1 operation returns the chain data (each RIC along with its FIDs and data) in a paged fashion.

The following example retrieves data for the BID and ASK fields for items from 11 to 20 of the 0#.DJI chain:

XML Sample Request - Get Chain

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/QuoteChains/QuoteChains.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2012/05/07/webservices/rkd/QuoteChains_1/GetChain_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetChain_Request_1 xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xmlns="http://www.reuters.com/ns/2012/02/02/webservices/rkd/QuoteChains_1">
      <Instrument>0#.DJI</Instrument>
      <Fields>BID:ASK</Fields>
      <Parameters>
        <Paging Page="2" PageSize="10" />
        <Response IncludeHints="true" />
      </Parameters>
    </GetChain_Request_1>
  </Body>
</Envelope>
```

Parameter	Description
Instrument	Single chain RIC (mandatory parameter).
Fields	List of FIDs (maximum 15 unique FIDs) separated by colons. This parameter is mandatory.
Page	Page number. If this parameter is not specified in the request, the first page is returned.
PageSize	Size of each page. The default Page Size is 15. Available values are: 5, 10, 25, 50, and 100.
IncludeHints	Setting this attribute to True will display hint attribute for each field in the response on how the data is displayed: decimal, fraction, date, or date time, and so on. This value is False by default.

Note: This operation will always trim the response.

XML Sample Response - Get Chain

```
<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" s:mustUnderstand="1"> http://www.reuters.com/ns/2012/05/07/webservices/rkd/QuoteChains_1/GetChain_1_Reply
    </a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetChain_Response_1 xmlns="http://www.reuters.com/ns/2012/02/02/webservices/rkd/QuoteChains_1">
      <PagingDetails instrumentsCount="10">
```



```

    <Prev>1</Prev>
    <Current>2</Current>
    <Next>3</Next>
  </PagingDetails>
  <ItemResponse>
    <Item>
      <RequestKey Name="0#.DJI" Service="" NameType="RIC"></RequestKey>
      <QoS>
        <TimelinessInfo TimeInfo="0" Timeliness="REALTIME"></TimelinessInfo>
        <RateInfo TimeInfo="3000" Rate="TICK_BY_TICK"></RateInfo>
      </QoS>
      <Status>
        <StatusMsg>OK</StatusMsg>
        <StatusCode>0</StatusCode>
      </Status>
      <Fields></Fields>
      <ChildItem Name="HD.N">
        <Status>
          <StatusMsg>OK</StatusMsg>
          <StatusCode>0</StatusCode>
        </Status>
        <Fields>
          <F n="BID" h="20">52.15</F>
          <F n="ASK" h="20">52.16</F>
        </Fields>
      </ChildItem>
      <ChildItem Name="MCD.N">
        <Status>
          <StatusMsg>OK</StatusMsg>
          <StatusCode>0</StatusCode>
        </Status>
        <Fields>
          <F n="BID" h="20">89.68</F>
          <F n="ASK" h="20">89.69</F>
        </Fields>
      </ChildItem>
      ...
    </ChildItem>
  </Item>
</ItemResponse>
</GetChain_Response_1>
</Body>
</Envelope>

```

Parameter	Description
PagingDetails	This section contains following information: • Prev - previous page number • Current - current page number • Next - next page number If there's no previous and/or next page, the Prev and/or Next elements are empty.
instrumentsCount	The number of constituents in the response.
Item	Each instrument listed in the request is returned in its own Item node containing: RequestKey, QoS, Status, Fields (FIDs). See below for description of each.
RequestKey	Contains the instrument name and the Service (data source) that provides the feed. The Service will have a value only if it's not the default data source.
QoS	Note: Each TRKD user ID is permissioned with only one Quality of Service - either Real-time or Delayed data. The Quote schema does provide alternate Qualities of Service (Desired and Worst Acceptable). These should be ignored for now. The TRKD infrastructure may utilize these capabilities in a future release. Should you require both real-time and delayed data, Thomson Reuters will provide you with two IDs, each permissioned with the relevant QoS. Is used to represent the desired quality of service. Quality of Service is a categorical method of classifying traffic into separate tiers to provide differentiated services within a network. Note that a user will only receive the QoS that he/she is permissioned for. Contains the following Attribute(s): • TimelinessInfo: Timeliness may be one of the following types:



	- o REALTIME - No delay is applied to the data. - o DELAYED - The data is delayed by the number of whole seconds specified in the TimeInfo attribute. - o DELAYED_UNKNOWN - A fixed delay (such as 60 seconds) is applied to the data. Valid only in responses, not requests. - o UNSPECIFIED - In QoS, use this value to request the most timely data allowed by the client's permissions. In WorstQoS, use this value to indicate that any timeliness is acceptable. • RateInfo: The actual rate of data as specified by the Rate. Rate may have one of the following values: - o TICK_BY_TICK - The data is updated on the server with every tick. - o JIT_CONFLATED - "Just in time" conflation is applied to the data before it reaches the server's cache. - o TIME_CONFLATED - Time-based conflation is applied to the data before it reaches the server's cache, in cycles of a duration specified in milliseconds in TimeInfo. - o PERIODIC_REFRESH - The data is updated on the server by a periodic refresh mechanism (e.g., a "pull"), at periods specified in milliseconds in TimeInfo. - o UNSPECIFIED - In QoS, this value corresponds with data being updated as often as possible. In WorstQoS, this value indicates that the update method is not critical.
Status	Status is used to convey the state of an Item. Status is present in each Item node. Status may contain source-specific messages such as a detailed error message, back-end error ID, or both.
Fields	The Field represents a data field (FID) associated to RICs (Instruments). Each Field object contains information such as field name (n attribute), display hint (h attribute) and field value. Display hints suggest how the data is to be displayed: decimal, fraction, date, or date time, and so on.
ChildItem	Each ChildItem represents a constituent of a chain (for example, Item RIC .AV.O and constituent RIC MSFT.O).

Error Messages

The table below contains some of the errors messages which are returned by this service:

Error	Description
RIC (...) is not a chain.	The RIC you specified in the request is not a chain symbol. Chain symbols usually start with "O#".
Unable to retrieve the requested page due to a backend error.	The data for the requested chain RIC (or its component) is temporarily not available. Try again later with a smaller page size.
The operation took too long to complete. Please try again later with a smaller page size.	This error sometimes appears in case of too heavy requests. Try again later with a smaller page size.

In case a particular error message persists, please contact the Online Solutions Team at Thomson Reuters.



chapter 36 Quote Lists

The QuoteList service lets you retrieve prices on multi-instrument and multi-field quotelists in a single request. You send a list of the instruments (RICs) and the fields to the QuoteList service and the latest available prices for these instruments are returned in the corresponding format. Optionally you may specify a single base currency to convert all prices to that currency. This is the most efficient way for you to access lists of instruments from TRKD, for example a list of indices on your home page, or a watchlist. Otherwise you would need to make one request for each instrument, one-by-one.

Up to 75 instruments and 25 fields may be included in each request.

A quotelist may contain any of the following types of instrument:

- exchange-traded stocks (for example: RIC VOD.L)
- indices (for example: RIC .DJI)
- exchange warrants (for example: RIC CH1031161.S)
- exchange bonds (for example: RIC CH1037959=S)
- bonds (for example: RIC US30YT=RR)
- exchange funds (for example: RIC SWBZ.S)
- foreign exchange (for example: RIC CHF=X)

36.1 Conflation

Thomson Reuters Knowledge Direct utilises a three second conflated feed as a source of its quotes data. This means that every three seconds the Thomson Reuters Knowledge Direct systems receive an update. This feed is used to supply data to TRKD delayed servers and provide real-time snap responses. Clients should be aware of this configuration aspect of the product in case there are differences in data highlighted when compared to alternate sources of the same data.

Note: The conflation on data on Thomson Reuters Knowledge API is 3 seconds for non-trade data (bid/ask, etc.).

36.2 Quote data

An instrument is identified by a RIC (Reuters Instrument Code). Each RIC has a series of attached fields that contain different items of information (for example, today's high price, traded volume, etc.). Not all instruments contain the same fields, and the fields are not always returned in the same order; this depends on the type of financial instrument (for example, stock, index, FX rate, fund, etc.).

Each field has a label that identifies it and it is called a Field Identifier or FID. Since you are parsing the data returned in XML format, it is essential that your program finds the required values by using these identifiers, not by searching for the third or fourth field (for example), because over time Thomson Reuters may add extra fields or change the field order.

Note: The value prior to/in the company name FID indicates the (designed) delay in the quote data. For example: "D15|Microsoft" says that the delay in the quote data for Microsoft is 15 minutes.

Full details of RICs, and the fields (FIDs) that accompany them, are provided in the TRKD Data Guide.

36.3 Authentication/Authorization, Service Endpoint, and Required Headers

Authorization

All requests to the QuoteList web service require an authorization token. For details, see section Understanding Authentication Tokens.

Authentication

In most implementations, QuoteList service uses unmanaged impersonation tokens for each effective user. In this case, it is up

to your application to supply (and otherwise manage) a unique identifier for each user; Thomson Reuters does not manage the user identities.

QuoteList service also supports Reuters impersonation tokens for each effective user. In this case, Thomson Reuters must create each user before your application authenticates them.

For additional information, see section [Creating a Token](#) for more information on creating a Service Token.

Service Endpoint

QuoteList Endpoint

<http://api.rkd.reuters.com/api/QuoteLists/QuoteLists.svc>

Required Header

Required HTTP Headers

POST /api/QuoteLists/QuoteLists.svc HTTP/1.1
Content-Type: application/soap+xml
Host: api.rkd.reuters.com
Content-Length: [length]

36.4 WSDL

WSDL:

http://api.rkd.reuters.com/schemas/QuoteLists/wsd/QuoteLists_1_HttpAndRKDToken.wsdl

36.5 Working with QuoteLists

The following operations demonstrate how to add, edit, delete and retrieve Quote lists.

36.5.1 Create QuoteList (CreateQuoteList_1)

CreateQuoteList_1 operation creates a Quote list for the user.

XSD

XSD: http://api.rkd.reuters.com/schemas/QuoteLists/QuoteLists_1.xsd

The following example creates a QuoteList named TestList7 with instruments IBM.N and MSFT.O. FIDs Currency, TRDPRC_1 and Unit are specified to be returned for each RIC in the response. RICs with FIDs are optional in the Create method. You are also able to add RICs after the QuoteList was created by using AddRICsFIDs_1 method. See section [Add RICs and FIDs \(AddRICsFIDs_Request_1\)](#) for more detail.

XML Sample Request - Create Quote List

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/QuoteLists/QuoteLists.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/QuoteLists_1/
      CreateQuoteList_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <CreateQuoteList_Request_1 validationMode="Tolerant" SaveInOrder="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-
      instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/
      QuoteLists_1">
```



```

<listName>TestList7</listName>
<RICs>
  <RIC>IBM.N</RIC>
  <RIC>MSFT.O</RIC>
</RICs>
<FIDs>
  <FID>CURRENCY</FID>
  <FID>TRDPRC_1</FID>
  <FID>UNIT</FID>
</FIDs>
</CreateQuoteList_Request_1>

```

```

</Body>
</Envelope>

```

Attribute	Description
validationMode	(Optional) Sets the validation criterion for RICs. Possible values are: Tolerant - ignores invalid RICs and returns data for valid RICs. Strict - returns an error if a request contains an invalid RIC.
SaveInOrder	(Optional) If this parameter is set to true, the API will save the fields defined in the request in the specified order.
listName	Name the quote list will be known as.
RICs	(Optional) The RIC (Reuters Instrument Code) that identifies the instrument. You can enter multiple RICs each in its own RIC tag.
FIDs	(Optional) FID, or Field Identifier, contains a list of fields you want to be shown in the request response for the instrument. Whenever information on the RIC(s) is requested it will return the fields entered here.
Note: Ability to view all the fields (FIDs) depends on client's entitlements.	

XML Sample Response - Create Quote List

```

<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" s:mustUnderstand="1"> http://www.reuters.com/ns/2006/05/01/webservices/rkd/http://www.reuters.com/ns/2006/05/01/webservices/rkd/QuoteLists_1/CreateQuoteList_1_Reply
  </a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <CreateQuoteList_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/QuoteLists_1">
      <CreateQuoteListResult>
        <ItemResponse>
          <Item xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/QuotesCommon">
            <RequestKey Name="IBM.N" Service="" />
            <QoS>
              <TimelinessInfo Timeliness="REALTIME" TimeInfo="0" />
              <RateInfo Rate="TICK_BY_TICK" TimeInfo="0" />
            </QoS>
            <Status>
              <StatusMsg>OK</StatusMsg>
              <StatusCode>0</StatusCode>
            </Status>
            <Fields>
              <Field DataType="Double" Name="TRDPRC_1">
                <Double>122.85</Double>
              </Field>
              <Field DataType="Utf8String" Name="CURRENCY">
                <Utf8String>USD</Utf8String>
              </Field>
              <Field DataType="Utf8String" Name="BQOS">
                <Utf8String>0</Utf8String>
              </Field>
              <Field DataType="Utf8String" Name="PQOS">
                <Utf8String>RT</Utf8String>
              </Field>
              <Field DataType="Utf8String" Name="ConcreteService">
                <Utf8String>FD3</Utf8String>
              </Field>
              <Field DataType="Int32" Name="MSG_TYPE">

```



```

        <Int32>0</Int32>
      </Field>
      <Field DataType="Int32" Name="REC_STATUS">
        <Int32>0</Int32>
      </Field>
    </Fields>
  </Item>
</Item>
<Item xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/QuotesCommon">
  <RequestKey Name="MSFT.O" Service="" />
  <QoS>
    <TimelinessInfo Timeliness="REALTIME" TimeInfo="0" />
    <RateInfo Rate="TICK_BY_TICK" TimeInfo="0" />
  </QoS>
  <Status>
    <StatusMsg>OK</StatusMsg>
    <StatusCode>0</StatusCode>
  </Status>
  <Fields>
    <Field DataType="Double" Name="TRDPRC_1">
      <Double>0</Double>
    </Field>
    <Field DataType="Utf8String" Name="CURRENCY">
      <Utf8String>USD</Utf8String>
    </Field>
    <Field DataType="Utf8String" Name="BQOS">
      <Utf8String>0</Utf8String>
    </Field>
    <Field DataType="Utf8String" Name="PQOS">
      <Utf8String>RT</Utf8String>
    </Field>
    <Field DataType="Utf8String" Name="ConcreteService">
      <Utf8String>FD3</Utf8String>
    </Field>
    <Field DataType="Int32" Name="MSG_TYPE">
      <Int32>0</Int32>
    </Field>
    <Field DataType="Int32" Name="REC_STATUS">
      <Int32>0</Int32>
    </Field>
  </Fields>
</Item>
</ItemResponse>
</CreateQuoteListResult>
</CreateQuoteList_Response_1>
</Body>
</Envelope>

```

Attribute	Description
Item	Each instrument listed in the request is returned in its own Item node containing: RequestKey, QoS, Status, Fields (FIDs). See below for description of each.
RequestKey	Contains the instrument name and the Service (data source) that provides the feed. The Service will have a value only if it's not the default data source.
QoS	Note: Each TRKD user ID is permissioned with only one Quality of Service - either Real-time or Delayed data. The Quote schema does provide alternate Qualities of Service (Desired and Worst Acceptable). These should be ignored for now. The TRKD infrastructure may utilize these capabilities in a future release. Should you require both real-time and delayed data, Thomson Reuters will provide you with two IDs, each permissioned with the relevant QoS. Is used to represent the desired quality of service. Quality of Service is a categorical method of classifying traffic into separate tiers to provide differentiated services within a network. Note that a user will only receive the QoS that he/she is permissioned for. Contains the following Attribute(s): • TimelinessInfo: Timeliness may be one of the following types: • REALTIME - No delay is applied to the data. • DELAYED - The data is delayed by the number of whole seconds specified in the TimeInfo attribute. • DELAYED_UNKNOWN - A fixed delay (such as 60 seconds) is applied to the data. Valid only in responses, not requests. • UNSPECIFIED - In QoS, use this value to request the most timely data allowed by the client's



	permissions. In WorstQoS, use this value to indicate that any timeliness is acceptable. • RateInfo: The actual rate of data as specified by the Rate. Rate may have one of the following values: • TICK_BY_TICK - The data is updated on the server with every tick. • JIT_CONFLATED - "Just in time" conflation is applied to the data before it reaches the server's cache. • TIME_CONFLATED - Time-based conflation is applied to the data before it reaches the server's cache, in cycles of a duration specified in milliseconds in TimeInfo. • PERIODIC_REFRESH - The data is updated on the server by a periodic refresh mechanism (e.g., a "pull"), at periods specified in milliseconds in TimeInfo. • UNSPECIFIED - In QoS, this value corresponds with data being updated as often as possible. In WorstQoS, this value indicates that the update method is not critical.
Status	Status is used to convey the state of an Item. Status is present in each Item node. Status may contain source-specific messages such as a detailed error message, back-end error ID, or both.
Fields	The Field represents a data field (FID) associated to RICs (Instruments). Each Field object contains information such as field name, value, data type and display hint. Display hints suggest how to display the data: decimal, fraction, date, or date time, and so on.

36.5.2 Get QuoteList (GetQuoteList_Request_1)

GetQuoteList_1 method retrieves Quote list for a specific user.

XSD

XSD: http://api.rkd.reuters.com/schemas/QuoteLists/QuoteLists_1.xsd

The following example retrieves all the instruments under a specified QuoteList.

XML Sample Request - Get Quote List

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/QuoteLists/QuoteLists.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/QuoteLists_1/GetQuoteList_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetQuoteList_Request_1 validationMode="Tolerant" TrimResponse="false" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/QuoteLists_1">
      <listName>TestList</listName>
    </GetQuoteList_Request_1>
  </Body>
</Envelope>
```

Attribute	Description
validation Mode	(Optional) Sets the validation criterion for RICs. Possible values are: • Tolerant - ignores invalid RICs and returns data for valid RICs. • Strict - returns an error if a request contains an invalid RIC.
TrimResponse	If this parameter is set to true, the API will return a much thinner XML response.
listName	Name of the quote list.

The response returns the following data:

XML Sample Response - Get Quote List



```
<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" s:mustUnderstand="1"> http://www.reuters.com/ns/2006/05/01/webservices/
rkd/http://www.reuters.com/ns/2006/05/01/webservices/rkd/QuoteLists_1/GetQuoteList_1_Reply
    </a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetQuoteList_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/QuoteLists_1">
      <GetQuoteListResult>
        <ItemResponse>
          <Item xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/QuotesCommon">
            <RequestKey Name="IBM.N" Service="" />
            <QoS>
              <TimelinessInfo Timeliness="REALTIME" TimeInfo="0" />
              <RateInfo Rate="TICK_BY_TICK" TimeInfo="0" />
            </QoS>
            <Status>
              <StatusMsg>OK</StatusMsg>
              <StatusCode>0</StatusCode>
            </Status>
            <Fields>
              <Field DataType="Double" Name="TRDPRC_1">
                <Double>122.85</Double>
              </Field>
              <Field DataType="Utf8String" Name="CURRENCY">
                <Utf8String>USD</Utf8String>
              </Field>
              <Field DataType="Utf8String" Name="BQOS">
                <Utf8String>0</Utf8String>
              </Field>
              <Field DataType="Utf8String" Name="PQOS">
                <Utf8String>RT</Utf8String>
              </Field>
              <Field DataType="Utf8String" Name="ConcreteService">
                <Utf8String>FD3</Utf8String>
              </Field>
              <Field DataType="Int32" Name="MSG_TYPE">
                <Int32>0</Int32>
              </Field>
              <Field DataType="Int32" Name="REC_STATUS">
                <Int32>0</Int32>
              </Field>
            </Fields>
          </Item>
          <Item xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/QuotesCommon">
            <RequestKey Name="MSFT.O" Service="" />
            <QoS>
              <TimelinessInfo Timeliness="REALTIME" TimeInfo="0" />
              <RateInfo Rate="TICK_BY_TICK" TimeInfo="0" />
            </QoS>
            <Status>
              <StatusMsg>OK</StatusMsg>
              <StatusCode>0</StatusCode>
            </Status>
            <Fields>
              <Field DataType="Double" Name="TRDPRC_1">
                <Double>0</Double>
              </Field>
              <Field DataType="Utf8String" Name="CURRENCY">
                <Utf8String>USD</Utf8String>
              </Field>
              <Field DataType="Utf8String" Name="BQOS">
                <Utf8String>0</Utf8String>
              </Field>
              <Field DataType="Utf8String" Name="PQOS">
                <Utf8String>RT</Utf8String>
              </Field>
              <Field DataType="Utf8String" Name="ConcreteService">
                <Utf8String>FD3</Utf8String>
              </Field>
              <Field DataType="Int32" Name="MSG_TYPE">
                <Int32>0</Int32>
              </Field>
            </Fields>
          </Item>
        </ItemResponse>
      </GetQuoteListResult>
    </GetQuoteList_Response_1>
  </s:Body>
</s:Envelope>
```



```

        <Field DataType="Int32" Name="REC_STATUS">
          <Int32>0</Int32>
        </Field>
      </Fields>
    </Item>
  </ItemResponse>
</GetQuoteListResult>
</GetQuoteList_Response_1>

</Body>
</Envelope>

```

Attribute	Description
Item	Each instrument listed in the request will be returned in its own Item node containing; RequestKey, QoS, Status, Fields (FIDs). See below for description of each.
RequestKey	Contains the instrument name and the Service (data source) that provides the feed. The Service will have a value only if it's not the default data source.
QoS	Note: Each TRKD user ID is permissioned with only one Quality of Service - either Real-time or Delayed data. The Quote schema does provide alternate Qualities of Service (Desired and Worst Acceptable). These should be ignored for now. The TRKD infrastructure may utilize these capabilities in a future release. Should you require both real-time and delayed data, Thomson Reuters will provide you with two IDs, each permissioned with the relevant QoS. Is used to represent the desired quality of service. Quality of Service is a categorical method of classifying traffic into separate tiers to provide differentiated services within a network. Note that a user will only receive the QoS that he/she is permissioned for. Contains the following Attribute(s): • TimelinessInfo: Timeliness may be one of the following types: • REALTIME - No delay is applied to the data. • DELAYED - The data is delayed by the number of whole seconds specified in the TimeInfo attribute. • DELAYED_UNKNOWN - A fixed delay (such as 60 seconds) is applied to the data. Valid only in responses, not requests. • UNSPECIFIED - In QoS, use this value to request the most timely data allowed by the client's permissions. In WorstQoS, use this value to indicate that any timeliness is acceptable. • RateInfo: The actual rate of data as specified by the Rate. Rate may have one of the following values: • TICK_BY_TICK - The data is updated on the server with every tick. • JIT_CONFLATED - Just in time" conflation is applied to the data before it reached the server's cache. • TIME_CONFLATED - Time-based conflation is applied to the data before it reaches the server's cache, in cycles of a duration specified in milliseconds in TimeInfo. • PERIODIC_REFRESH - The data is updated on the server by a periodic refresh mechanism (e.g., a "pull"), at periods specified in milliseconds in TimeInfo. • UNSPECIFIED - In QoS, this value corresponds with data being updated as often as possible. In WorstQoS, this value indicates that the update method is not critical.
Status	Status is used to convey the state of an Item. Status is present in each Item node. Status may contain source-specific messages such as a detailed error message, back-end error ID, or both.
Fields	The Field represents a data field (FID) associated to RICs (Instruments). Each Field object contains information such as field name, value, data type and display hint. Display hints suggest how to display the data: decimal, fraction, date, or date time, and so on.

36.5.3 Delete QuoteList (DeleteQuoteList_Request_1)

DeleteQuoteList_Request_1 method deletes a specified Quote List belonging to a user.

XSD

XSD: http://api.rkd.reuters.com/schemas/QuoteLists/QuoteLists_1.xsd

The following example deletes a QuoteList with name test1.

XML Sample Request - Delete Quote List




```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/QuoteLists/QuoteLists.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/QuoteLists_1/
DeleteQuoteList_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <DeleteQuoteList_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/QuoteLists_1">
      <listName>test1</listName>
    </DeleteQuoteList_Request_1>
  </Body>
</Envelope>

```

Attribute	Description
listName	List to be deleted.

XML Sample Response - Delete Quote List

```

<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" s:mustUnderstand="1"> http://www.reuters.com/ns/2006/05/01/webservices/
rkd/http://www.reuters.com/ns/2006/05/01/webservices/rkd/QuoteLists_1/DeleteQuoteList_1_Reply
    </a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <DeleteQuoteList_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/QuoteLists_1" />
  </s:Body>
</Envelope>

```

36.5.4 Get Listing (GetListing_Request_1)

GetListing_Request_1 operation returns all QuoteLists for a specified user.

XSD

XSD: http://api.rkd.reuters.com/schemas/QuoteLists/QuoteLists_1.xsd

XML Sample Request - Get List

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/QuoteLists/QuoteLists.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/QuoteLists_1/
GetListing_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetListing_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/QuoteLists_1"/>
  </Body>
</Envelope>

```



XML Sample Response - Get List

```

<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" s:mustUnderstand="1"> http://www.reuters.com/ns/2006/05/01/webservices/rkd/
http://www.reuters.com/ns/2006/05/01/webservices/rkd/QuoteLists_1/GetListing_1_Reply
    </a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetListing_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/QuoteLists_1">
      <QuoteLists>
        <QuoteList rics_count="2" fids_count="3" updated_at="2011-06-17T11:10:18.860">11235813</QuoteList>
        <QuoteList rics_count="4" fids_count="2" updated_at="2011-06-24T14:37:56.987">Currency</QuoteList>
        <QuoteList rics_count="1" fids_count="1" updated_at="2011-06-20T11:59:00.010">list111</QuoteList>
        <QuoteList rics_count="2" fids_count="2" updated_at="2011-06-20T06:45:03.397">list123</QuoteList>
        <QuoteList rics_count="4" fids_count="2" updated_at="2011-06-24T13:16:12.170">list1234</QuoteList>
        <QuoteList rics_count="5" fids_count="4" updated_at="2011-06-21T23:15:18.770">my list</QuoteList>
        <QuoteList rics_count="3" fids_count="5" updated_at="2011-06-23T10:48:35.320">Watchlist1</QuoteList>
      </QuoteLists>
    </GetListing_Response_1>
  </Body>
</Envelope>

```

Attribute	Description
QuoteLists	Contains a listing of all QuoteLists that belong to the specified user. Also, the response contains how many RIC's and FID's are in each saved quote list and the time when a QuoteList was updated last time.

36.6 Working with Instruments

The following operations demonstrate how to add or remove RICs and FIDs to the QuoteList.

36.6.1 Add RICs and FIDs (AddRICsFIDs_Request_1)

This operation allows you to add additional RICs with defined FID fields. The example below shows how to add two RICs (IBM.N and CSC.O) and three FIDs for them (CURRENCY, TRDPRC_1 and UNIT).

XSD

XSD: http://api.rkd.reuters.com/schemas/QuoteLists/QuoteLists_1.xsd

XML Sample Request - Add RICs and FIDs

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/QuoteLists/QuoteLists.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/QuoteLists_1/
AddRICsFIDs_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <AddRICsFIDs_Request_1 validationMode="Tolerant" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/QuoteLists_1">
      <listName>TestList</listName>
      <RICs>
        <RIC>IBM.N</RIC>
        <RIC>CSC.O</RIC>
      </RICs>
      <FIDs>
        <FID>CURRENCY</FID>
        <FID>TRDPRC_1</FID>
        <FID>UNIT</FID>
      </FIDs>
    </AddRICsFIDs_Request_1>
  </Body>
</Envelope>

```



</FIDs>
</AddRICsFIDs_Request_1>
</Body>
</Envelope>

Attribute	Description
validationMode	Sets the validation criterion for RICs. Possible values are: • Tolerant - ignores invalid RICs and returns data for valid RICs. • Strict - returns an error if a request contains an invalid RIC.
listName	The list that instruments should be added to.
RICs	A list of additional instrument(s) that will be added to the List.
FIDs	The FID represents a data field that will be associated to each of the RICs in the RICs node. Each Field object will contain information such as field name, value, data type and display hint that will be returned whenever that RIC is queried.

XML Sample Response - Add RICs and FIDs

```
<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" s:mustUnderstand="1"> http://www.reuters.com/ns/2006/05/01/webservices/rkd/
    http://www.reuters.com/ns/2006/05/01/webservices/rkd/QuoteLists_1/AddRICsFIDs_1_Reply
    </a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <AddRICsFIDs_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/QuoteLists_1">
      <AddRICsFIDsResult>
        <ItemResponse>
          <Item xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/QuotesCommon">
            <RequestKey Name="IBM.N" Service="" />
            <QoS>
              <TimelinessInfo Timeliness="UNSPECIFIED" TimeInfo="0" />
              <RateInfo Rate="UNSPECIFIED" TimeInfo="0" />
            </QoS>
            <Status>
              <StatusMsg>OK</StatusMsg>
              <StatusCode>0</StatusCode>
            </Status>
            <Fields>
              <Field DataType="Utf8String" Name="CURRENCY" >
                <Utf8String>840</Utf8String>
              </Field>
              <Field DataType="Double" Name="TRDPRC_1" >
                <Double>94.12</Double>
              </Field>
              <Field DataType="Utf8String" Name="BQOS" >
                <Utf8String>0</Utf8String>
              </Field>
              <Field DataType="Utf8String" Name="PQOS" >
                <Utf8String>RT</Utf8String>
              </Field>
              <Field DataType="Int32" Name="MSG_TYPE" >
                <Int32>0</Int32>
              </Field>
              <Field DataType="Int32" Name="REC_STATUS" >
                <Int32>0</Int32>
              </Field>
            </Fields>
          </Item>
          <Item xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/QuotesCommon">
            <RequestKey Name="CSCO.O" Service="" />
            <QoS>
              <TimelinessInfo Timeliness="REALTIME" TimeInfo="0" />
              <RateInfo Rate="TICK_BY_TICK" TimeInfo="0" />
            </QoS>
            <Status>
              <StatusMsg>OK</StatusMsg>
              <StatusCode>0</StatusCode>
            </Status>
          </Item>
        </ItemResponse>
      </AddRICsFIDsResult>
    </AddRICsFIDs_Response_1>
  </s:Body>
</s:Envelope>
```



```

<Fields>
  <Field DataType="Double" Name="TRDPRC_1">
    <Double>0</Double>
  </Field>
  <Field DataType="Utf8String" Name="CURRENCY">
    <Utf8String>USD</Utf8String>
  </Field>
  <Field DataType="Utf8String" Name="BQOS">
    <Utf8String>0</Utf8String>
  </Field>
  <Field DataType="Utf8String" Name="PQOS">
    <Utf8String>RT</Utf8String>
  </Field>
  <Field DataType="Utf8String" Name="ConcreteService">
    <Utf8String>FD3</Utf8String>
  </Field>
  <Field DataType="Int32" Name="MSG_TYPE">
    <Int32>0</Int32>
  </Field>
  <Field DataType="Int32" Name="REC_STATUS">
    <Int32>0</Int32>
  </Field>
</Fields>
</Item>
</ItemResponse>
</AddRICsFIDsResult>
</AddRICsFIDs_Response_1>

</Body>
</Envelope>

```

Attribute	Description
Item	Each instrument listed in the request is returned in its own Item node containing: RequestKey, QoS, Status, Fields (FIDs). See below for description of each.
RequestKey	Contains the instrument name and the Service (data source) that provides the feed. The Service will have a value only if it's not the default data source.
QoS	Note: Each TRKD user ID is permissioned with only one Quality of Service - either Real-time or Delayed data. The Quote schema does provide alternate Qualities of Service (Desired and Worst Acceptable). These should be ignored for now. The TRKD infrastructure may utilize these capabilities in a future release. Should you require both real-time and delayed data, Thomson Reuters will provide you with two IDs, each permissioned with the relevant QoS. Is used to represent the desired quality of service. Quality of Service is a categorical method of classifying traffic into separate tiers to provide differentiated services within a network. Note that a user will only receive the QoS that he/she is permissioned for. Contains the following Attribute(s): • TimelinessInfo: Timeliness may be one of the following types: • REALTIME - No delay is applied to the data. • DELAYED - The data is delayed by the number of whole seconds specified in the TimeInfo attribute. • DELAYED_UNKNOWN - A fixed delay (such as 60 seconds) is applied to the data. Valid only in responses, not requests. • UNSPECIFIED - In QoS, use this value to request the most timely data allowed by the client's permissions. In WorstQoS, use this value to indicate that any timeliness is acceptable. • RateInfo: The actual rate of data as specified by the Rate. Rate may have one of the following values: • TICK_BY_TICK - The data is updated on the server with every tick. • JIT_CONFLATED - "Just in time" conflation is applied to the data before it reaches the server's cache. • TIME_CONFLATED - Time-based conflation is applied to the data before it reaches the server's cache, in cycles of a duration specified in milliseconds in TimeInfo. • PERIODIC_REFRESH - The data is updated on the server by a periodic refresh mechanism (e.g., a "pull"), at periods specified in milliseconds in TimeInfo. • UNSPECIFIED - In QoS, this value corresponds with data being updated as often as possible. In WorstQoS, this value indicates that the update method is not critical.
Status	Status is used to convey the state of an Item. Status is present in each Item node. Status may contain



	source-specific messages such as a detailed error message, back-end error ID, or both.
Fields	The Field represents a data field (FID) associated to RICs during QuoteList creation or through the Add RICs and FIDs method. Each Field object contains information such as field name, value, data type and display hint. Display hints suggest how the data is to be displayed: decimal, fraction, date, or date time, and so on.

36.6.2 Remove RICs and FIDs (RemoveRICsFIDs_Request_1)

This operation enables you to remove added instruments from an existing quote list.

XSD	
XSD: http://api.rkd.reuters.com/schemas/QuoteLists/QuoteLists_1.xsd	
XML Sample Request - Remove RICs with FIDs	
<pre><Envelope xmlns="http://www.w3.org/2003/05/soap-envelope"> <Header> <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/QuoteLists/QuoteLists.svc</To> <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID> <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/QuoteLists_1/RemoveRICsFIDs_1</Action> <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1"> <ApplicationID>[AppID]</ApplicationID> <Token>[Impersonation Token]</Token> </Authorization> </Header> <Body> <RemoveRICsFIDs_Request_1 validationMode="Tolerant" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/QuoteLists_1"> <listName>TestList</listName> <RICs> <RIC>CSCO.O</RIC> </RICs> <FIDs> <FID>UNIT</FID> </FIDs> </RemoveRICsFIDs_Request_1> </Body> </Envelope></pre>	

Attribute	Description
validationMode	(Optional) Sets the validation criterion for RICs. Possible values are: Tolerant - ignores invalid RICs and returns data for valid RICs. Strict - returns an error if a request contains an invalid RIC.
listName	The list that instruments should be removed from.
RICs	A list of instrument(s) that will be removed from the List.
FIDs	This method allows you to remove a specific or multiple FIDs currently under a RIC. The FID represents a data field that will be associated to each of the RICs in the RICs node. Each Field object will contain information such as field name, value, data type and display hint that will be returned whenever that RIC is queried.

XML Sample Response - Remove RICs and FIDs	
<pre><s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope"> <s:Header> <a:Action xmlns="http://www.w3.org/2005/08/addressing" s:mustUnderstand="1"> http://www.reuters.com/ns/2006/05/01/webservices/rkd/http://www.reuters.com/ns/2006/05/01/webservices/rkd/QuoteLists_1/AddRICsFIDs_1_Reply </a:Action> <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo> </s:Header> <s:Body> <RemoveRICsFIDs_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/QuoteLists_1"> <RemoveRICsFIDsResult></pre>	

```

<ItemResponse>
  <Item xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/QuotesCommon">
    <RequestKey Name="IBM.N" Service="" />
    <QoS>
      <TimelinessInfo Timeliness="UNSPECIFIED" TimeInfo="0" />
      <RateInfo Rate="UNSPECIFIED" TimeInfo="0" />
    </QoS>
    <Status>
      <StatusMsg>OK</StatusMsg>
      <StatusCode>0</StatusCode>
    </Status>
    <Fields>
      <Field DataType="Utf8String" Name="CURRENCY">
        <Utf8String>USD</Utf8String>
      </Field>
      <Field DataType="Double" Name="TRDPRC_1">
        <Double>116.4</Double>
      </Field>
      <Field DataType="Utf8String" Name="BQOS">
        <Utf8String>0</Utf8String>
      </Field>
      <Field DataType="Utf8String" Name="PQOS">
        <Utf8String>RT</Utf8String>
      </Field>
      <Field DataType="Int32" Name="MSG_TYPE">
        <Int32>0</Int32>
      </Field>
      <Field DataType="Int32" Name="REC_STATUS">
        <Int32>0</Int32>
      </Field>
    </Fields>
  </Item>
</ItemResponse>
</RemoveRICsFIDsResult>
</RemoveRICsFIDs_Response_1>

</Body>
</Envelope>

```

36.7 Get Simple Data 2

For cases when all you need is a way to retrieve a single or multiple RICs with the ability to specify fields (FIDs) GetSimpleData2 method is what you need. This method does not use QuoteLists assigned to any individual but rather just retrieves the RICs and FIDs without saving anything.

Note: Ability to view all the fields (FIDs) depends on client's entitlements.

XSD

XSD: http://api.rkd.reuters.com/schemas/QuoteLists/QuoteLists_1.xsd

XML Sample Request - Get Simple Data

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/QuoteLists/QuoteLists.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/QuoteLists_1/GetSimpleData_2</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetSimpleData_Request_2 validationMode="Tolerant" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/QuoteLists_1">
      <RICs>
        <RIC>IBM.N</RIC>
      </RICs>
    </GetSimpleData_Request_2>
  </Body>
</Envelope>

```



```

    <RIC>VOD.L</RIC>
  </RICs>
  <FIDs>
    <FID>CURRENCY</FID>
    <FID>TRDPRC_1</FID>
    <FID>UNIT</FID>
  </FIDs>
</GetSimpleData_Request_2>

```

```

</Body>
</Envelope>

```

Attribute	Description
validationMode	(Optional) Sets the validation criterion for RICs. Possible values are: • Tolerant - ignores invalid RICs and returns data for valid RICs. • Strict - returns an error if a request contains an invalid RIC.
RICs	The RIC (Reuters Instrument Code) that identifies the instrument. You can enter multiple RICs, each in its own RIC tag.
FIDs	FID, or Field Identifier, contains a list of fields you want to show in the response for the instrument. Note: Ability to view all the fields (FIDs) depends on client's entitlements.

XML Sample Response - Get Simple Data

```

<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" s:mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/rkd/QuoteLists_1/GetSimpleData_1_Reply</a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetSimpleData_Response_2 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/QuoteLists_1">
      <SimpleDataResult>
        <ItemResponse>
          <omm:Item xmlns:omm="http://www.reuters.com/ns/2006/05/01/webservices/rkd/QuotesCommon">
            <omm:RequestKey Name="NVJ.A" Service=""></omm:RequestKey>
            <omm:QoS>
              <omm:TimelinessInfo Timeliness="DELAYED" TimeInfo="900"></omm:TimelinessInfo>
              <omm:RateInfo Rate="TIME_CONFLATED" TimeInfo="3000"></omm:RateInfo>
            </omm:QoS>
            <omm:Status>
              <omm:StatusMsg>OK</omm:StatusMsg>
              <omm:StatusCode>0</omm:StatusCode>
            </omm:Status>
            <omm:Fields>
              <omm:Field DataType="Utf8String" Name="DSPLY_NAME">
                <omm:Utf8String>NUVEEN OH DIV 3</omm:Utf8String>
              </omm:Field>
              <omm:Field DataType="Utf8String" Name="BQOS">
                <omm:Utf8String>0</omm:Utf8String>
              </omm:Field>
              <omm:Field DataType="Utf8String" Name="PQOS">
                <omm:Utf8String>RT</omm:Utf8String>
              </omm:Field>
              <omm:Field DataType="Int32" Name="MSG_TYPE">
                <omm:Int32>0</omm:Int32>
              </omm:Field>
              <omm:Field DataType="Int32" Name="REC_STATUS">
                <omm:Int32>0</omm:Int32>
              </omm:Field>
            </omm:Fields>
          </omm:Item>
        </ItemResponse>
      </SimpleDataResult>
    </GetSimpleData_Response_2>
  </s:Body>
</Envelope>

```



Attribute	Description
Item	Each instrument listed in the request is returned in its own Item node containing: RequestKey, QoS, Status, Fields (FIDs). See below for description of each.
RequestKey	Contains the instrument name and the Service (data source) that provides the feed. The Service will have a value only if it's not the default data source.
QoS	Note: Each TRKD user ID is permissioned with only one Quality of Service - either Real-time or Delayed data. The Quote schema does provide alternate Qualities of Service (Desired and Worst Acceptable). These should be ignored for now. The TRKD infrastructure may utilize these capabilities in a future release. Should you require both real-time and delayed data, Thomson Reuters will provide you with two IDs, each permissioned with the relevant QoS. Is used to represent the desired quality of service. Quality of Service is a categorical method of classifying traffic into separate tiers to provide differentiated services within a network. Note that a user will only receive the QoS that he/she is permissioned for. Contains the following Attribute(s): • TimelinessInfo: Timeliness may be one of the following types: • REALTIME - No delay is applied to the data. • DELAYED - The data is delayed by the number of whole seconds specified in the <TimeInfo> attribute. • DELAYED_UNKNOWN - A fixed delay (such as 60 seconds) is applied to the data. Valid only in responses, not requests. • UNSPECIFIED - In QoS, use this value to request the most timely data allowed by the client's permissions. In WorstQoS, use this value to indicate that any timeliness is acceptable. • RateInfo: The actual rate of data as specified by the Rate. Rate may have one of the following values: • TICK_BY_TICK - The data is updated on the server with every tick. • JIT_CONFLATED - "Just in time" conflation is applied to the data before it reaches the server's cache. • TIME_CONFLATED - Time-based conflation is applied to the data before it reaches the server's cache, in cycles of a duration specified in milliseconds in the <TimeInfo> attribute. • PERIODIC_REFRESH - The data is updated on the server by a periodic refresh mechanism (e.g., a "pull"), at periods specified in milliseconds in the <TimeInfo> attribute. • UNSPECIFIED - In QoS, this value corresponds with data being updated as often as possible. In WorstQoS, this value indicates that the update method is not critical.
Status	Status is used to convey the state of an Item. Status is present in each Item node. Status may contain source-specific messages such as a detailed error message, back-end error ID, or both.
Fields	The Field represents a data field (FID) associated to RICs during QuoteList creation or through the Add RICs and FIDs method. Each Field object contains information such as field name, value, data type and display hint. Display hints suggest how the data is to be displayed: decimal, fraction, date, or date time, and so on. Note: The value prior to/in the company name FID indicates the (designed) delay in the quote data. For example: "D15 Microsoft" says that the delay in the quote data for Microsoft is 15 minutes.

36.8 Get Quote List Content

The following example retrieves content for the "temp2" Quote List:

XML Sample Request - Get Quote List

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/QuoteLists/QuoteLists.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/QuoteLists_1/GetQuoteListContent_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetQuoteListContent_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/QuoteLists_1">
      <RequestKey>[RequestKey]</RequestKey>
      <QoS>[QoS]</QoS>
    </GetQuoteListContent_1>
  </Body>
</Envelope>
```




```

    </Authorization>
  </Header>
  <Body>
    <GetQuoteListContent_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/QuoteLists_1">
      <listName>temp2</listName>
    </GetQuoteListContent_Request_1>
  </Body>
</Envelope>

```

Attribute	Description
listName	Name of the quote list.

The response returns the following data:

XML Sample Response - Get Quote List

```

<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" s:mustUnderstand="1"> http://www.reuters.com/ns/2006/05/01/webservices/rkd/http://www.reuters.com/ns/2006/05/01/webservices/rkd/QuoteLists_1/GetQuoteListContent_1_Reply
  </a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetQuoteListContent_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/QuoteLists_1">
      <GetQuoteListContentResult>
        <QuoteListContent>
          <RICs>
            <RIC>IBM.N</RIC>
          </RICs>
        </QuoteListContent>
      </GetQuoteListContentResult>
    </GetQuoteListContent_Response_1>
  </s:Body>
</Envelope>

```

Attribute	Description
RICs	Lists all RICs (Reuters Instrument Codes) included into the specified Quote List.



chapter 37 Quote

The Quotes service enables you to retrieve a **snap quote** or a **quote chain**. TRKD API delivers snap prices only; you may not deliver streaming prices using TRKD API. By default TRKD provides delayed stock prices. However, if your organization has an agreement within an exchange to provide its prices in real-time, then real-time snap prices can be delivered by TRKD for that exchange.

Note: Up to 75 instruments and 25 fields may be included in each request.

37.1 Quote Performance

By default, the TRKD API Quote service returns most fields associated with a RIC. This is useful when you are trying to understand the breadth of data available, but it can be wasteful of network bandwidth if you do not limit the fields you request when you implement the definitive version of your solution.

TRKD API lets you choose exactly which fields you retrieve when you request a quote for a specific RIC. We strongly recommend that you use this feature in order to decrease response times and bandwidth requirements.

How to make a request?

The Fields element in RetrieveItem_3 can be used to specify a colon-delimited list of fields you want to retrieve. When you do so, it is necessary to use the Scope attribute on the ItemRequest element to specify 'List'. Without setting the Scope attribute to 'List', the contents of the Fields parameter will be ignored by TRKD API.

XML Sample Request

```
<RetrieveItem_Request_3 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Quotes_1">
  <ItemRequest Scope="List">
    <Fields>CF_NAME:CF_LAST:CF_DATE:CF_TIME</Fields>
    <RequestKey Name="MSFT.O" NameType="RIC"/>
  </ItemRequest>
</RetrieveItem_Request_3>
```

How to determine which fields to display?

Because each asset class has different fields which are important, you need to first determine the asset class of the instrument you are requesting. This can be found by looking up the RIC in the Search service and requesting the AssetCategoryName field.

■ VODAFONE GROUP PLC (ORDINARY) - MIFID TOP LIQUIDITY SECURITY

Source: London Stock Exchange

```
PI: 1049261
AssetCategory: ORD
AssetCategoryName: Equity/Ordinary
RIC: VOD.L
```

This can also be found by requesting the RECORDTYPE field in the Quote service:



VOD.L - OK

Field	Value
RECORDTYPE	113

The main RecordType values and the asset classes they map to are listed below:

RecordType	Asset Class
16	Indices
17	Indices
22	Indices
24	Forex
30	Economics
33	Bonds
34	Futures
38	Indices
56	Bonds
65	Bonds
72	Bonds
80	Bonds
81	Bonds
97	Warrant
98	Futures
99	Options
101	Market Stats
102	Indices
104	Equities
112	Indices
113	Equities
114	Futures
115	Options
117	Market Stats
118	Indices
120	Equities
130	Futures
134	Indices
136	Options
146	Futures
168	Futures
178	Futures
194	Futures
198	Indices
200	Futures
209	FX
210	Futures
211	Options
214	Indices
216	FX



225	Equities
241	FX
242	Futures
248	Futures
255	FX

Once you have determined the asset class for a RIC, then you can find the main fields for each asset class here - <https://customers.reuters.com/a/support/paz/pazDocs.aspx?dId=436066>. There may well be other fields which are important to your clients, and each exchange has a different range of fields available. The guide found at the link provided above is intended to be an indicative guide only.

37.2 Conflation

Thomson Reuters Knowledge Direct utilises a three second conflated feed as a source of its quotes data. This means that every three seconds the Thomson Reuters Knowledge Direct systems receive an update. This feed is used to supply data to TRKD delayed servers and provide real-time snap responses. Clients should be aware of this configuration aspect of the product in case there are differences in data highlighted when compared to alternate sources of the same data.

Note: The conflation on data on Thomson Reuters Knowledge API is 3 seconds for non-trade data (bid/ask, etc.).

37.3 Quote Data

An instrument is identified by a RIC (Reuters Instrument Code). Each RIC has a series of attached fields that contain different items of information (for example, today's high price, traded volume, etc.). Not all instruments contain the same fields, and the fields are not always returned in the same order; this depends on the type of financial instrument (for example, stock, index, FX rate, fund, etc.).

Each field has a label that identifies it and it is called a Field Identifier or FID. Since you are parsing the data returned in XML format, it is essential that your program finds the required values by using these identifiers, not by searching for the third or fourth field (for example), because over time Thomson Reuters may add extra fields or change the field order.

Note: The value prior to/in the company name FID indicates the (designed) delay in the quote data. For example: "D15|Microsoft" says that the delay in the quote data for Microsoft is 15 minutes.

Full details of RICs, and the fields (FIDs) that accompany them, are provided in the TRKD Data Guide.

37.4 Quote Chain Data

A quote chain provides summary price information for a series of related instruments, such as all the constituents of the FTSE 100 Index, or the highest net gainers of the day on NASDAQ. Most quote chain RICs begin with "0#".

The number of instruments in a chain, the order of instruments and the position of any particular instrument, are not always constant and cannot be relied upon. They are often modified to reflect changing market conditions and may also differ between markets.

Also, as with quotes, when you are parsing XML data you must search for specific field identifiers within the chain to find the required information.

37.5 Company Background Information

Many stocks have associated background information for the company, including details such as its type of business, its headquarters address, and its summarized financial results. Typically, the background RIC for this information has a suffix ending with "B2" (for example, the background RIC for the stock IBM.N is IBM.NB2).

Where a company is traded on different exchanges, the background RIC will be associated with the main exchange only. If necessary, you can find the background RIC by requesting the stock RIC, and the background RIC is returned in the BKGD_REF field.



37.6 Authentication/Authorization, Service Endpoint, and Required Headers

Authorization

All requests to Thomson Reuters Quote web service require an authorization token. For details, see section Understanding Authentication Tokens.

Authentication

Thomson Reuters Quote uses Reuters impersonation tokens for each effective user. In this case, Thomson Reuters must create each user before your application authenticates them. Unmanaged effective users are not supported in Thomson Reuters Quote.

For additional information on creating a Service Token, see section Creating a Token.

Service Endpoint

Quote Endpoint

<http://api.rkd.reuters.com/api/Quotes/Quotes.svc>

Required Header

Required HTTP Headers

POST /api/Quotes/Quotes.svc HTTP/1.1
Content-Type: application/soap+xml
Host: api.rkd.reuters.com
Content-Length: [length]

37.7 WSDL

WSDL:

http://api.rkd.reuters.com/schemas/Quotes/wsd/Quotes_1_HttpAndRKDToken.wsdl

37.8 Retrieving Quotes (RetrieveItem_Request_3)

You can use the RetrieveItem_Request_3 operation to specify information you want to see in the response.

XSD

XSD: http://api.rkd.reuters.com/schemas/Quotes/Quotes_1.xsd

The following is a basic example that shows how to use the RetrieveItem_Request_3 operation to retrieve information for one instrument without filtering on returned fields.

XML Sample Request - Get Quotes

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Quotes/Quotes.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Quotes_1/RetrieveItem_3</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <RetrieveItem_Request_3 TrimResponse="false" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Quotes_1">
      <ItemRequest Scope="All" >
```



```

    <RequestKey Name="MSFT.O"/>
  </ItemRequest>
</RetrieveItem_Request_3>

</Body>
</Envelope>

```

Attribute	Description
ItemRequest	Specifies request attributes to retrieve a specific or multiple instruments. ItemRequest attributes are listed below. Contains the following attribute(s): • IncludeHints: Setting this attribute to True will display hint attribute for each field in the response on how the data is displayed: decimal, fraction, date, or date time, and so on. This value is False by default. • ExpandChain: By default the value is true which results in showing all data (Fields) for each of the Instruments in the chain. If the value is set to false only data about the chain will be sent with a listing of all Instruments contained but without detailed information about them. • ProvideChainLinks: Setting this attribute to True will display Chain links. • EnableEmptyLinks: Setting this attribute to True will display Empty links. • Scope: You can indicate what fields you want returned for instruments listed in RequestKey by entering one of the following options into the scope: • All - Is a default value that returns all the fields. • AllExcept - Excludes the fields entered into the Fields attribute. Note: Currently this option is not supported. • List - Returns only the fields indicated in Fields attribute. Thomson Reuters recommends setting this option in all requests. Note: Each symbol specified has to have the exchange (example: TRIN.O). Symbol format should be as follows [Symbol].[Exchange].
Fields	(optional) A string containing the names of the desired fields, separated by a colon (no spaces). The Quotes service returns this set of fields for each Request Key in ItemRequest. The service permits the specification of an additional namespace and user-defined data type in this string.
RequestKey	Specifies item name and service name.
TrimResponse	If this parameter is set to true, the API will return a much thinner XML response.

The table below explains Hint display values:

Display Format	Hint Value
Integer	0
String	64
Fraction	1 through 8, indicating one of the following base fractions: 1, 1/2, 1/4, 1/16, 1/32, 1/128, 1/256.
Decimal	16 through 25, indicating the number of decimal places. 16 indicates zero decimal places, 17 indicates one decimal place, and so on up to nine decimal.
Date as MM/DD/YYYY	258
Time as 00:00	259
Time as 00:00:00	260

For example: if "Hint"=260 then Field value is time in format 00:00:00.

XML Sample Response - Get Quotes

```

<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" s:mustUnderstand="1"> http://www.reuters.com/ns/2006/05/01/webservices/
rkd/http://www.reuters.com/ns/2006/05/01/webservices/rkd/Quotes_1/RetrieveItem_3_Reply
    </a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>

```



```

<ns0:RetrieveItem_Response_3 xmlns:ns0="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Quotes_1" xmlns:omm="http://
www.reuters.com/ns/2006/05/01/webservices/rkd/QuotesCommon" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/
Quotes_1">
  <ns0:ItemResponse>
    <omm:Item>
      <omm:RequestKey Name="MSFT.O" NameType="RIC" Service=""></omm:RequestKey>
      <omm:QoS>
        <omm:TimelinessInfo TimeInfo="0" Timeliness="REALTIME"></omm:TimelinessInfo>
        <omm:RateInfo Rate="TICK_BY_TICK" TimeInfo="0"></omm:RateInfo>
      </omm:QoS>
      <omm:Status>
        <omm:StatusMsg>OK</omm:StatusMsg>
        <omm:StatusCode>0</omm:StatusCode>
      </omm:Status>
      <omm:Fields>
        <omm:Field DataType="Utf8String" Name="DSPLY_NAME">
          <omm:Utf8String>MICROSOFT CP </omm:Utf8String>
        </omm:Field>
        <omm:Field DataType="Double" Name="TRDPRC_1">
          <omm:Double>0.000000</omm:Double>
        </omm:Field>
        <omm:Field DataType="Double" Name="TRDPRC_2">
          <omm:Double>0.000000</omm:Double>
        </omm:Field>
        <omm:Field DataType="Double" Name="TRDPRC_3">
          <omm:Double>0.000000</omm:Double>
        </omm:Field>
        ...
        <omm:Field DataType="Utf8String" Name="CF_CURRENCY">
          <omm:Utf8String>USD</omm:Utf8String>
        </omm:Field>
        <omm:Field DataType="Utf8String" Name="CF_NAME">
          <omm:Utf8String>MICROSOFT CP </omm:Utf8String>
        </omm:Field>
      </omm:Fields>
    </omm:Item>
  </ns0:ItemResponse>
</ns0:RetrieveItem_Response_3>

</Body>
</Envelope>

```

Attribute	Description
Item	Instrument listed in the ItemRequest will be returned in its own Item node containing: RequestKey, Status, Fields (FIDs) for each Instrument. See below for description of each.
RequestKey	Contains the instrument name and the Service (data source) that provides the feed. The Service will have a value only if its not the default data source.
Status	Status is used to convey the state of an Item. Status is present in each Item node. Status may contain source-specific messages such as a detailed error message, back-end error ID, or both.
Fields	The Field represents a data field (FID) associated to RICs (Instruments). Each Field object contains information such as field name, value, data type and display hint. Display hints suggest how to display the data: decimal, fraction, date, or date time, and so on.

Get Quote Request with Multiple Instruments

Below is another basic example showing how to retrieve information on multiple instruments in the same request.

XML Sample Request - Get Quotes with Multiple instruments

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Quotes/Quotes.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Quotes_1/
RetrieveItem_3</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>

```



```

<Body>
  <RetrieveItem_Request_3 TrimResponse="false" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Quotes_1">
    <ItemRequest Scope="All" >
      <RequestKey Name="MSFT.O"/>
      <RequestKey Name="VOD.L"/>
    </ItemRequest>
  </RetrieveItem_Request_3>
</Body>
</Envelope>

```

Get Quote Request with Fields specified

The control over what fields (information) are returned in the response is yours as well. In the request, you enter a colon delimited (':') names of fields and choose if you either want only those fields to be returned or excluded from the response. In the following example only the field NEWS is returned. The Quote service returns NEWS fields along with several mandatory response fields.

XML Sample Request - Get Quotes with Specified Fields

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Quotes/Quotes.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Quotes_1/RetrieveItem_3</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <RetrieveItem_Request_3 TrimResponse="false" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Quotes_1">
      <ItemRequest>
        <Fields>BID:CF_BID</Fields>
        <RequestKey Name="MSFT.O"/>
      </ItemRequest>
    </RetrieveItem_Request_3>
  </Body>
</Envelope>

```

Get Quote Request with Multiple ItemRequest

Use multiple ItemRequest elements to group instruments. This becomes useful if you want to specify different properties (Fields returned) for one group of instruments and not another.

XML Sample Request - Get Quotes with Multiple ItemRequest Sections

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/rkd/Quotes/Quotes.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Quotes_1/RetrieveItem_3</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <RetrieveItem_Request_3 TrimResponse="false" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Quotes_1">
      <ItemRequest IncludeHints="true" >
        <Fields>NEWS</Fields>
        <RequestKey Name="MSFT.O"/>
      </ItemRequest>
      <ItemRequest Scope="All" >
        <RequestKey Name="IBM.N"/>
      </ItemRequest>
    </RetrieveItem_Request_3>
  </Body>
</Envelope>

```




```

</ItemRequest>
</RetrieveItem_Request_3>
</Body>
</Envelope>

```

Note: The only possible value for NameType attribute is RIC.

37.9 Retrieving Quote Chain

To retrieve a quote chain, enter a chain symbol instead of a regular RIC. Chain symbols usually start with "0#". When you request a chain instrument code, TRKD API returns all the instrument codes, which constitute the chain.

If a chain contains a large number of RICs, the response size grows heavily and chances of getting a timeout error increase. For this reason, we recommend using QuoteChains_1 service, which is optimized for chains processing.

Note. If you prefer to use Quotes_1 service for some reason, set the parameters described in the next section, Recommended Parameters for Retrieving Quote Chain.

The following example shows how to retrieve the information and format of the reply.

XSD

XSD: http://api.rkd.reuters.com/schemas/Quotes/Quotes_1.xsd

XML Sample Request - Get Quote Chain

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Quotes/Quotes.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Quotes_1/RetrieveItem_3</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <RetrieveItem_Request_3 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Quotes_1">
      <ItemRequest Scope="All">
        <Fields />
        <RequestKey Name="0#.DJI" NameType="RIC" />
      </ItemRequest>
    </RetrieveItem_Request_3>
  </Body>
</Envelope>

```

You can find the description of all attributes in the previous section, Retrieving Quotes (RetrieveItem_Request_3).

The request returns the following data:

XML Sample Response - Get Quote Chain

```

<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" s:mustUnderstand="1"> http://www.reuters.com/ns/2006/05/01/webservices/rkd/http://www.reuters.com/ns/2006/05/01/webservices/rkd/Quotes_1/RetrieveItem_3_Reply
    </a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <ns0:RetrieveItem_Response_3 xmlns:ns0="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Quotes_1" xmlns:omm="http://www.reuters.com/ns/2006/05/01/webservices/rkd/QuotesCommon" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Quotes_1">
      <ns0:ItemResponse>
        <omm:Item>

```



```

<omm:RequestKey Name="0#.DJI" NameType="RIC" Service=""></omm:RequestKey>
<omm:QoS>
  <omm:TimelinessInfo TimeInfo="0" Timeliness="DELAYED"></omm:TimelinessInfo>
  <omm:RateInfo Rate="TIME_CONFLATED" TimeInfo="3000"></omm:RateInfo>
</omm:QoS>
<omm:Status>
  <omm:StatusMsg>OK</omm:StatusMsg>
  <omm:StatusCode>0</omm:StatusCode>
</omm:Status>
<omm:Fields>
  <omm:Field DataType="Int32" Name="PROD_PERM">
    <omm:Int32>2766</omm:Int32>
  </omm:Field>
  <omm:Field DataType="Int32" Name="RDNDISPLAY">
    <omm:Int32>187</omm:Int32>
  </omm:Field>
  <omm:Field DataType="Utf8String" Name="DSPLY_NAME">
    <omm:Utf8String>DJ INDUSTRIA</omm:Utf8String>
  </omm:Field>
  ....
</omm:Fields>
<omm:ChildItem Name=".DJI">
  <omm:Status>
    <omm:StatusMsg>OK</omm:StatusMsg>
    <omm:StatusCode>0</omm:StatusCode>
  </omm:Status>
  <omm:Fields>
    <omm:Field DataType="Int32" Name="PROD_PERM">
      <omm:Int32>6437</omm:Int32>
    </omm:Field>
    <omm:Field DataType="Int32" Name="RDNDISPLAY">
      <omm:Int32>125</omm:Int32>
    </omm:Field>
    <omm:Field DataType="Utf8String" Name="DSPLY_NAME">
      <omm:Utf8String>DJ INDU AVER</omm:Utf8String>
    </omm:Field>
    ...
  </omm:Fields>
</omm:ChildItem>
</omm:Item>
</ns0:ItemResponse>
</ns0:RetrieveItem_Response_3>

</Body>
</Envelope>

```

Attribute	Description
Item	Instrument listed in the ItemRequest will be returned in its own Item node containing: RequestKey, Status, Fields (FIDs) for each Instrument. See below for description of each.
RequestKey	Contains the instrument name and the Service (data source) that provides the feed. The Service will have a value only if it's not the default data source.
Status	Status is used to convey the state of an Item. Status is present in each Item node. Status may contain source-specific messages such as a detailed error message, back-end error ID, or both.
Fields	The Field represents a data field (FID) associated to RICs (Instruments). Each Field object contains information such as field name, value, data type and display hint. Display hints suggest how the data is to be displayed: decimal, fraction, date, or date time, and so on.
ChildItem	Each ChildItem represents a constituent of a chain (for example Item RIC .AV.O and constituent RIC MSFT.O).

Please note that if you use **ExpandChains="true"** option (default) when requesting a chain instrument code, TRKD API returns the data for **all** RICs included in this particular chain RIC (e.g. 0#.DJI) in **one** XML response. Due to large response size the chances of getting a timeout error increase.

For this reason, we recommend using QuoteChains_1 instead of Quotes_1. If you prefer to use the Quotes_1 service for some reason, set the following parameters for retrieving quote chains (see the next section).



37.9.1 Recommended Parameters for Retrieving Quote Chain

To reduce the response size when retrieving a quote chain with Quotes_1, use the following parameters:

- **ExpandChains**="false"
- **Scope**="List"
- **Fields**: LONGPREVLR:LONGNEXTLR:NEXT_LR:PREF_LINK:ONGLINK1:ONGLINK2:ONGLINK3:ONGLINK4:ONGLINK5:ONGLINK6:ONGLINK7:ONGLINK8:ONGLINK9:ONGLINK10:ONGLINK11:ONGLINK12:ONGLINK13:ONGLINK14:LINK_1:LINK_2:LINK_3:LINK_4:LINK_5:LINK_6:LINK_7:LINK_8:LINK_9:LINK_10:LINK_11:LINK_12:LINK_13:LINK_14

Example:

XML Sample Request - Get Quote Chain with ExpandChains="false"

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Quotes/Quotes.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Quotes_1/RetrieveItem_3</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <RetrieveItem_Request_3 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Quotes_1">
      <ItemRequest ExpandChains="false" Scope="List">
        <Fields>LONGPREVLR:LONGNEXTLR:NEXT_LR:PREF_LINK:ONGLINK1:ONGLINK2:ONGLINK3:ONGLINK4:
        LONGLINK5:ONGLINK6:ONGLINK7:ONGLINK8:ONGLINK9:ONGLINK10:ONGLINK11:ONGLINK12:ONGLINK13:
        LONGLINK14:LINK_1:LINK_2:LINK_3:LINK_4:LINK_5:LINK_6:LINK_7:LINK_8:LINK_9:LINK_10:LINK_11:LINK_12:
        LINK_13:LINK_14</Fields>
        <RequestKey Name="0#.FTSE" NameType="RIC" />
      </ItemRequest>
    </RetrieveItem_Request_3>
  </Body>
</Envelope>
```

This request returns the following data:

XML Sample Response - Get Quote Chain with ExpandChains="false"

```
<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" s:mustUnderstand="1"> http://www.reuters.com/ns/2006/05/01/webservices/rkd/
    http://www.reuters.com/ns/2006/05/01/webservices/rkd/Quotes_1/RetrieveItem_3_Reply
    </a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <<ns1:RetrieveItem_Response_3 xmlns:ns1="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Quotes_1">
      <ns1:ItemResponse>
        <omm:Item xmlns:omm="http://www.reuters.com/ns/2006/05/01/webservices/rkd/QuotesCommon">
          <omm:RequestKey NameType="RIC" Service="" Name="0#.FTSE"></omm:RequestKey>
          <omm:QoS>
            <omm:TimelinessInfo TimeInfo="0" Timeliness="REALTIME"></omm:TimelinessInfo>
            <omm:RateInfo TimeInfo="3000" Rate="TICK_BY_TICK"></omm:RateInfo>
          </omm:QoS>
          <omm:Status>
            <omm:StatusMsg>OK</omm:StatusMsg>
            <omm:StatusCode>0</omm:StatusCode>
          </omm:Status>
          <omm:Fields>
            <omm:Field Name="ONGLINK1" DataType="Utf8String">
              <omm:Utf8String>.FTSE</omm:Utf8String>
            </omm:Field>
```



```

<omm:Field Name="LONGLINK2" DataType="Utf8String">
  <omm:Utf8String>.AD.FTSE</omm:Utf8String>
</omm:Field>
<omm:Field Name="LONGLINK3" DataType="Utf8String">
  <omm:Utf8String>AAL.L</omm:Utf8String>
</omm:Field>
<omm:Field Name="LONGLINK4" DataType="Utf8String">
  <omm:Utf8String>ABF.L</omm:Utf8String>
</omm:Field>
<omm:Field Name="LONGLINK5" DataType="Utf8String">
  <omm:Utf8String>ADML.L</omm:Utf8String>
</omm:Field>
<omm:Field Name="LONGLINK6" DataType="Utf8String">
  <omm:Utf8String>AGGK.L</omm:Utf8String>
</omm:Field>
<omm:Field Name="LONGLINK7" DataType="Utf8String">
  <omm:Utf8String>AMEC.L</omm:Utf8String>
</omm:Field>
<omm:Field Name="LONGLINK8" DataType="Utf8String">
  <omm:Utf8String>ANTO.L</omm:Utf8String>
</omm:Field>
<omm:Field Name="LONGLINK9" DataType="Utf8String">
  <omm:Utf8String>ARM.L</omm:Utf8String>
</omm:Field>
<omm:Field Name="LONGLINK10" DataType="Utf8String">
  <omm:Utf8String>ASHM.L</omm:Utf8String>
</omm:Field>
<omm:Field Name="LONGLINK11" DataType="Utf8String">
  <omm:Utf8String>AV.L</omm:Utf8String>
</omm:Field>
<omm:Field Name="LONGLINK12" DataType="Utf8String">
  <omm:Utf8String>AZN.L</omm:Utf8String>
</omm:Field>
<omm:Field Name="LONGLINK13" DataType="Utf8String">
  <omm:Utf8String>BAES.L</omm:Utf8String>
</omm:Field>
<omm:Field Name="LONGLINK14" DataType="Utf8String">
  <omm:Utf8String>BARC.L</omm:Utf8String>
</omm:Field>
<omm:Field Name="LONGPREVLR" DataType="Utf8String">
  <omm:Utf8String></omm:Utf8String>
</omm:Field>
<omm:Field Name="LONGNEXTLR" DataType="Utf8String">
  <omm:Utf8String>1#.FTSE</omm:Utf8String>
</omm:Field>
</omm:Fields>
</omm:Item>
</ns1:ItemResponse>
</ns1:RetrieveItem_Response_3>
</Body>
</Envelope>

```

LONGLINK1- LONGLINK14 fields (or LINK_1 - LINK_14 fields for some chains) contain 14 child RICs.

LONGNEXTLR and LONGPREVLR fields (or NEXT_LR and PREF_LINK fields for some chains) contain the next and the previous chain RICs. Using these chains you can retrieve the next and the previous portions of 14 child RICs respectively.

After you retrieve all child RICs, make a quote request (e.g. using RetrieveItem_3 method) for stored RICs.

Note. We recommend using QuoteChains_1 instead of Quotes_1 to retrieve quote chains.



chapter 38 Reference Information

The Reference Information service enables you to retrieve the input criteria used to search for broker research documents (see section Document Search for more details). You can also use this service to associate names with codes and to map local codes (as defined by the contributor) to global codes (as defined by Thomson Reuters).

The following reference lists can be retrieved using this service:

- Category
- Contributor
- Country
- Currency
- Industry
- Language
- Region
- Contributor Subjects
- Research Subjects
- Research Purposes
- Disciplines
- Report Styles
- UIDs

38.1 Authentication/Authorization, Service Endpoint, and Required Headers

Authorization

All requests to the Reference Information web service require an authorization token. For details, see section Understanding Authentication Tokens.

Authentication

Thomson Reuters Reference Information service uses Reuters impersonation tokens for each effective user. In this case, Thomson Reuters must create each user before your application authenticates them. Unmanaged effective users are not supported in Thomson Reuters Reference Information.

For additional information on creating a Service Token, see section Creating a Token.

Service Endpoint

Reference Information Endpoint

`http://api.rkd.reuters.com/api/RefInfo/RefInfo.svc`

Required Header

Required HTTP Headers

POST api/RefInfo/RefInfo.svc HTTP/1.1
Content-Type: application/soap+xml
Host: api.rkd.reuters.com
Content-Length: [length]

38.2 WSDL

WSDL:



http://api.rkd.reuters.com/schemas/RefInfo/wsdl/RefInfo_1_HttpAndRKDToken.wsdl

38.3 Understanding Reference Information Request

This section provides information on the codes used in Thomson Reuters Knowledge Direct API. These codes include:

- Global Codes
- Local Codes
- Set Codes
- UIDs

Also, this section provides information on the reference lists can be retrieved using the Reference Information service:

- Category
- Contributor
- Country
- Currency
- Industry
- Language
- Region
- Contributor Subjects
- Research Subjects
- Research Purposes
- Disciplines
- Report Styles

38.3.1 Understanding Reuters Knowledge Direct API Codes

The Thomson Reuters Knowledge Direct API uses two type of codes that are defined by either Thomson Reuters (global codes) or the contributor (local codes) that uniquely identify reference records within a particular reference type. You use set codes to designate the specific local codes you want to use. In addition, Thomson Reuters maintains numeric Universal Identifiers (UIDs) to uniquely identify reference records across all reference types.

38.3.1.1 Global Codes

Global codes are defined by Thomson Reuters and uniquely identify reference records within a particular reference type. Your application can use these codes for document searches across multiple contributors where local codes would have no meaning. They are also used for single contributor document searches when a particular contributor does not use local codes for a particular reference type.

Although global codes are different from UIDs, the categorization reference types (categorization subject, discipline, reason, and report style) use the UID as the global code since this data is supplied by Thomson Reuters.

38.3.1.2 Local Codes

Local codes are defined by a contributor, and uniquely identify reference records within a particular reference type. These codes may be used for document searches for the contributor. The reference types supporting local codes are as follows:

- Author/analyst
- Country
- Currency
- Industry
- Region
- Subject

Contributors may supply local codes for all, some, or none of the reference types. All other reference types support global codes only.



Note: The Thomson Reuters Knowledge Direct API does not support searching for local country or currency codes. Also the API always returns global author/analyst codes even if the application searches used local codes.

38.3.1.3 Set Codes

A set code is a contributor specific string used to determine whether the query is using global or local codes. Set codes generally have the form "XX#12345" where "XX" is an abbreviation for the contributor name, and "12345" is the contributor UID.

For example, the set code "MX#001" represents Thomson Reuters, and is the set code used for global codes. If you have the proper entitlements, you can determine set codes for a particular contributor using the <contributorSearchCriterion/> element of the <GetReferenceListsRequest>.

38.3.1.4 UIDs

UIDs are numbers consisting of a 1 or 2-digit reference type followed by a 7-digit record number. The currently defined reference types are described in the following table.

Code	Description
0	Contributors (leading 0's are never included; for example, a typical contributor UID is "12345", not "00012345")
1	Subject
2	Category
3	Country
4	Currency
5	Region
6	N/A
7	N/A
8	Industry
9	Issuer/Parent Company (Symbology)
10	Language
11	Subject (Categorization)
12	Discipline (Categorization)
13	Reason (Categorization)
14	Report Style (Categorization)

38.3.2 Countries

During the contribution process, contributors tag documents with country information. You can use the Reference Information service to generate country information for use in a document search.

The following sample code displays how to generate country information. This request returns both the local and global country codes:

XML Sample Request - Generating Country Information

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/RefInfo/RefInfo.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/RefInfo_1/GetInfo_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
```



```

GetInfo_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/RefInfo_1">
  <genReq>
    <countrySearchCriterion details="max" sortBy="byName" sortOrder="asc" >
      <countryByCountryCriterion>
        <setCodeCriterion/>
      </countryByCountryCriterion>
    </countrySearchCriterion>
  </genReq />
</GetInfo_Request_1>

</Body>
</Envelope>

```

Attribute	Description
details	The amount and type of data returned. Choose from "min", "max", "uidOnly", "docsearch", or "default".
sortBy	Choose from "byName", "byLocalCode", or "byGlobalCode".
sortOrder	Choose from "asc" or "desc".

38.3.3 Currencies

During the contribution process, contributors tag documents with currency information. You can use the Reference Information service to generate a list of supported currencies.

The following sample code displays how to retrieve currency information:

XML Sample Request - Generating Currency Information

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/RefInfo/RefInfo.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/RefInfo_1/GetInfo_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    GetInfo_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/RefInfo_1">
      <genReq>
        <currencySearchCriterion details="max" sortBy="byName" sortOrder="asc"
          <setCodeCriterion setCode="[contributor set code]"/>
        </currencySearchCriterion>
      </genReq />
    </GetInfo_Request_1>
  </Body>
</Envelope>

```

Attribute	Description
details	The amount and type of data returned. Choose from "min", "max", "uidOnly", "docsearch", or "default".
sortBy	Choose from "byName", "byLocalCode", or "byGlobalCode".
sortOrder	Choose from "asc" or "desc".
contributor set code	Specifies the contributor codes to return (local codes). By default, this request returns Thomson Reuters (global) codes.

38.3.4 Industries

During the contribution process, contributors tag documents by industry. You can use the Reference Information service to generate a list of industries and codes for a contributor.



This request returns both the local and global industry codes. The following sample code displays how to generate a list of industries:

XML Sample Request - Generating Industries Information

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/RefInfo/RefInfo.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/RefInfo_1/GetInfo_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    GetInfo_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/RefInfo_1">
      <genReq>
        <industrySearchCriterion details="docsearch" sortBy="byName" sortOrder="asc"
          <setCodeCriterion setCode="[contributor set code]"/>
        </industrySearchCriterion>
      </genReq />
    </GetInfo_Request_1>
  </Body>
</Envelope>
```

Attribute	Description
details	The amount and type of data returned. Choose from "min", "max", "uidOnly", "docsearch", or "default".
sortBy	Choose from "byName", "byLocalCode", or "byGlobalCode".
sortOrder	Choose from "asc" or "desc".
contributor set code	Specifies the contributor codes to return (local codes). By default, this request returns Thomson Reuters (global) codes.

38.3.5 Regions

During the contribution process, contributors tag documents by region. You can use the Reference Information service to generate a list of regions and codes for a contributor.

This request returns both the local and global region codes. The following sample code displays how to generate a list of regions:

XML Sample Request - Generating Regions Information

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/RefInfo/RefInfo.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/RefInfo_1/GetInfo_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    GetInfo_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/RefInfo_1">
      <genReq>
        <regionSearchCriterion details="docsearch" sortBy="byName" sortOrder="asc"
          <setCodeCriterion setCode="[contributor set code]"/>
        </regionSearchCriterion>
      </genReq />
    </GetInfo_Request_1>
  </Body>
</Envelope>
```



```
</GetInfo_Request_1>
```

```
</Body>
</Envelope>
```

Attribute	Description
details	The amount and type of data returned. Choose from "min", "max", "uidOnly", "docsearch", or "default".
sortBy	Choose from "byName", "byLocalCode", or "byGlobalCode".
sortOrder	Choose from "asc" or "desc".
contributor set code	Specifies the contributor codes to return (local codes). By default, this request returns Thomson Reuters (global) codes.

38.3.6 Categories

During the contribution process, contributors tag documents by category. You can use the Reference Information service to generate a list of categories and codes for a contributor.

This request returns both the local and global category codes. The following sample code displays how to generate a list of categories:

XML Sample Request - Generating Categories Information

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/RefInfo/RefInfo.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/RefInfo_1/GetInfo_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    GetInfo_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/RefInfo_1">
      <genReq>
        <categorySearchCriterion details="docsearch" sortBy="byName" sortOrder="asc"
          <setCodeCriterion setCode="[contributor set code]"/>
        </categorySearchCriterion>
      </genReq />
    </GetInfo_Request_1>
  </Body>
</Envelope>
```

Attribute	Description
details	The amount and type of data returned. Choose from "min", "max", "uidOnly", "docsearch", or "default".
sortBy	Choose from "byName", "byLocalCode", or "byGlobalCode".
sortOrder	Choose from "asc" or "desc".
contributor set code	Specifies the contributor codes to return (local codes). By default, this request returns Thomson Reuters (global) codes.

38.3.7 Contributors

You can use the Reference Information service to generate a list of contributor information based on your entitlements. The list returned includes only contributors matching your document entitlements. That is, contributors of documents you can view/download.

Note: The "alias" attribute in the returned data is the contributor's set code.

The following sample code displays how to generate a list of contributors:

XML Sample Request - Generating Contributors Information

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/RefInfo/RefInfo.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/RefInfo_1/GetInfo_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    GetInfo_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/RefInfo_1">
      <genReq>
        <contributorSearchCriterion details="docsearch" sortBy="byName" sortOrder="asc"
          <dsCtbCriterion/>
        </contributorSearchCriterion>
      </genReq />
    </GetInfo_Request_1>
  </Body>
</Envelope>
```

Attribute	Description
details	The amount and type of data returned. Choose from "min", "max", "uidOnly", "docsearch", or "default".
sortBy	Choose from "byName", "byLocalCode", or "byGlobalCode".
sortOrder	Choose from "asc" or "desc".

38.3.8 Languages

During the contribution process contributors tag documents by language. You can use the Reference Information service to generate a list of supported languages.

The following sample code displays how to generate a list of supported languages:

XML Sample Request - Generating Languages Information

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/RefInfo/RefInfo.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/RefInfo_1/GetInfo_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    GetInfo_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/RefInfo_1">
      <genReq>
        <languageSearchCriterion details="docsearch">
          <rfc1766Criterion/>
        </languageSearchCriterion>
      </genReq />
    </GetInfo_Request_1>
  </Body>
</Envelope>
```



Attribute	Description
details	The amount and type of data returned. Choose from "min", "max", "uidOnly", "docsearch", or "default".
rfc1766Criterion	Indicates the data conforms to RFC (Request for Comments) 1766.

38.3.9 Subjects

During the contribution process contributors tag documents by subject. You can use the Reference Information service to generate a list of subjects and codes for a contributor.

This request returns both the local and global category codes. The following sample code displays how to generate a list of subjects:

XML Sample Request - Generating Subjects Information

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/RefInfo/RefInfo.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/RefInfo_1/GetInfo_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    GetInfo_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/RefInfo_1">
      <genReq>
        <subjectSearchCriterion details="docsearch" sortBy="byName" sortOrder="asc"
          <setCodeCriterion setCode="[contributor set code]"/>
        </subjectSearchCriterion>
      </genReq />
    </GetInfo_Request_1>
  </Body>
</Envelope>
```

Attribute	Description
details	The amount and type of data returned. Choose from "min", "max", "uidOnly", "docsearch", or "default".
sortBy	Choose from "byName", "byLocalCode", or "byGlobalCode".
sortOrder	Choose from "asc" or "desc".
contributor set code	Specifies the contributor codes to return (local codes). By default, this request returns Thomson Reuters (global) codes.

38.3.10 Type of Analysis (Disciplines)

During the contribution process Thomson Reuters automatically categorizes documents based on types of analysis (disciplines). You can use the Reference Information service to generate a list of the discipline categories.

The following sample code displays how to generate a list of disciplines:

XML Sample Request - Generating Type of Analysis (Disciplines) Information

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/RefInfo/RefInfo.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/RefInfo_1/GetInfo_1</Action>
```



```

    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    GetInfo_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/RefInfo_1">
      <genReq>
        <c12nDisciplineSearchCriterion details="docsearch" sortBy="byName" sortOrder="asc"/>
      </genReq />
    </GetInfo_Request_1>
  </Body>
</Envelope>

```

Attribute	Description
details	The amount and type of data returned. Choose from "min", "max", "uidOnly", "docsearch", or "default".
sortBy	Choose from "byName", "byLocalCode", or "byGlobalCode".
sortOrder	Choose from "asc" or "desc".

38.3.11 Research Categories (Report Styles)

During the contribution process Thomson Reuters automatically categorizes documents based on research categories (report styles). You can use the Reference Information service to generate a list of research categories.

The following sample code displays how to generate a list of research categories:

XML Sample Request - Generating Research Categories (Report Styles) Information

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/RefInfo/RefInfo.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/RefInfo_1/GetInfo_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    GetInfo_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/RefInfo_1">
      <genReq>
        <c12nRptStyleSearchCriterion details="docsearch" sortBy="byName" sortOrder="asc"/>
      </genReq />
    </GetInfo_Request_1>
  </Body>
</Envelope>

```

Attribute	Description
details	The amount and type of data returned. Choose from "min", "max", "uidOnly", "docsearch", or "default".
sortBy	Choose from "byName", "byLocalCode", or "byGlobalCode".
sortOrder	Choose from "asc" or "desc".

38.3.12 Research Subjects

During the contribution process Thomson Reuters automatically categorizes documents based on research subjects. You can use the Reference Information service to generate a list of research subjects.

The following sample code displays how to generate a list of research subjects:

XML Sample Request - Generating Research Subjects Information

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/RefInfo/RefInfo.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/RefInfo_1/GetInfo_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    GetInfo_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/RefInfo_1">
      <genReq>
        <c12nSubjectSearchCriterion details="docsearch" sortBy="byName" sortOrder="asc"/>
      </genReq />
    </GetInfo_Request_1>
  </Body>
</Envelope>

```

Attribute	Description
details	The amount and type of data returned. Choose from "min", "max", "uidOnly", "docsearch", or "default".
sortBy	Choose from "byName", "byLocalCode", or "byGlobalCode".
sortOrder	Choose from "asc" or "desc".

38.3.13 Research Purpose (Reasons)

During the contribution process Thomson Reuters automatically categorizes documents based on the research purpose (reasons). You can use the Reference Information service to generate a list of the research purposes.

The following sample code displays how to generate a list of research purposes:

XML Sample Request - Generating Research Purpose (Reasons) Information

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/RefInfo/RefInfo.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/RefInfo_1/GetInfo_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    GetInfo_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/RefInfo_1">
      <genReq>
        <c12nReasonSearchCriterion details="docsearch" sortBy="byName" sortOrder="asc"/>
      </genReq />
    </GetInfo_Request_1>
  </Body>
</Envelope>

```

Attribute	Description
details	The amount and type of data returned. Choose from "min", "max", "uidOnly", "docsearch", or "default".
sortBy	Choose from "byName", "byLocalCode", or "byGlobalCode".
sortOrder	Choose from "asc" or "desc".



38.4 Get Information (GetInfo_1)

The GetInfo_1 request is used to retrieve necessary reference information. The request also provides various search criteria that you can use to perform a more detailed search for critical information. The search criteria include:

- Category
- Contributor
- Country
- Currency
- Industry
- Language
- Region Subject

See section Understanding Reference Information Request for more details on these criteria.

The GetInfo_1 request also has common search criteria that allow you to filter information by specific language; to sort information by name, Global or Local Code; to specify sorting order and set level of details to be returned in the response (Min, Max, UID or DocSearch). For more information on codes and UIDs, see section Understanding Reuters Knowledge Direct API Codes.

The following example shows how to retrieve information about languages.

XML Sample Request - Get Information

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/RefInfo/RefInfo.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/RefInfo_1/GetInfo_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetInfo_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/RefInfo_1" acceptLanguage="en">
      <genReq>
        <languageSearchCriterion details="max" sortOrder="desc" sortBy="byGlobalCode" mxExistingLang="false">
          <uidCriterion>
            <id>110000073</id>
            <id>110000035</id>
            <id>110000028</id>
            <id>110000125</id>
            <id>110000088</id>
            <id>110000087</id>
            <id>110000148</id>
          </uidCriterion>
        </languageSearchCriterion>
      </genReq>
    </GetInfo_Request_1>
  </Body>
</Envelope>
```

XML Sample Response - Get Information

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/01/12/webservices/rkd/RefInfo_1/GetInfo_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
```



```

<GetInfo_Response_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/RefInfo_1" containedLanguages="en-us">
  <languageInfo containedLanguages="en-us">
    <language cp="1252" mxExistingLang="false" mxLangMap="" rfc1766="zh-hk" uid="110000028">
      <name>Chinese (Hong Kong)</name>
    </language>
    <language cp="1252" mxExistingLang="false" mxLangMap="" rfc1766="zh" uid="110000125">
      <name>Xhosa</name>
    </language>
    <language cp="1251" mxExistingLang="true" mxLangMap="" rfc1766="sr" uid="110000088">
      <name>Serbian (Cyrillic)</name>
    </language>
    <language cp="1252" mxExistingLang="false" mxLangMap="" rfc1766="ru-mo" uid="110000087">
      <name>Russian (Moldova)</name>
    </language>
    <language cp="1252" mxExistingLang="true" mxLangMap="" rfc1766="no" uid="110000148">
      <name>Norwegian</name>
    </language>
    <language cp="932" mxExistingLang="true" mxLangMap="" rfc1766="ja" uid="110000073">
      <name>Japanese</name>
    </language>
    <language cp="1252" mxExistingLang="true" mxLangMap="en-us, en-ca;q=.9, en-gb;q=.8, en;q=.0001" rfc1766="en"
      uid="110000035">
      <name>English</name>
    </language>
  </languageInfo>
</GetInfo_Response_1>
</Body>
</Envelope>

```

38.5 Get Information, Extended (GetInfoEx_1)

The GetInfoEx_1 request is similar to the GetInfo_1 request, only it has two additional common search criteria that allow you to separate the information by language and include duplicates into the response.

See section Get Information (GetInfo_1) for more details on other request items.

The following is an example of GetInfoEx_1 request.

XML Sample Request - Get Information, Extended

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/RefInfo/RefInfo.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/RefInfo_1/
      GetInfoEx_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetInfoEx_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/RefInfo_1" acceptLanguage="en">
      <genReq>
        <languageSearchCriterion details="max" sortOrder="desc" sortBy="byGlobalCode" mxExistingLang="false">
          <uidCriterion>
            <id>110000073</id>
            <id>110000035</id>
            <id>110000028</id>
            <id>110000125</id>
            <id>110000088</id>
            <id>110000087</id>
            <id>110000148</id>
          </uidCriterion>
        </languageSearchCriterion>
      </genReq>
    </GetInfoEx_Request_1>
  </Body>
</Envelope>

```




```
</Body>
</Envelope>
```

XML Sample Response - Get Information, Extended

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/01/12/webservices/
rkd/RefInfo_1/GetInfoEx_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <GetInfoEx_Response_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/RefInfo_1" containedLanguages="en-us">
      <languageInfo containedLanguages="en-us">
        <language cp="1252" mxExistingLang="false" mxLangMap="" rfc1766="zh-hk" uid="110000028">
          <name>Chinese (Hong Kong)</name>
        </language>
        <language cp="1252" mxExistingLang="false" mxLangMap="" rfc1766="xh" uid="110000125">
          <name>Xhosa</name>
        </language>
        <language cp="1251" mxExistingLang="true" mxLangMap="" rfc1766="sr" uid="110000088">
          <name>Serbian (Cyrillic)</name>
        </language>
        <language cp="1252" mxExistingLang="false" mxLangMap="" rfc1766="ru-mo" uid="110000087">
          <name>Russian (Moldova)</name>
        </language>
        <language cp="1252" mxExistingLang="true" mxLangMap="" rfc1766="no" uid="110000148">
          <name>Norwegian</name>
        </language>
        <language cp="932" mxExistingLang="true" mxLangMap="" rfc1766="ja" uid="110000073">
          <name>Japanese</name>
        </language>
        <language cp="1252" mxExistingLang="true" mxLangMap="en-us, en-ca;q=.9, en-gb;q=.8, en;q=.0001" rfc1766="en"
uid="110000035">
          <name>English</name>
        </language>
      </languageInfo>
    </GetInfoEx_Response_1>
  </Body>
</Envelope>
```

38.6 Get Information from UID (GetInfoFromUid_1)

The GetInfoFromUid_1 request is used to retrieve necessary reference information from specific UIDs. See section UIDs for more details on UIDs.

The following is an example of GetInfoFromUid_1 request.

XML Sample Request - Get Information from UID

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/RefInfo/RefInfo.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/RefInfo_1/
GetInfoFromUid_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetInfoFromUid_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/RefInfo_1" acceptLanguage="ru,ja,es,en,
fr">
      <id>1</id>
    </GetInfoFromUid_Request_1>
  </Body>
</Envelope>
```



```

<id>2</id>
<id>3</id>
<id>6</id>
<id>6</id>
<id>6</id>
<id>27</id>
<id>27</id>
<id>27</id>
<id>5451</id>
<id>60000411</id>
<id>60000398</id>
<id>60000398</id>
<id>60000429</id>
<id>60000428</id>
<id>60000394</id>
<id>90060936</id>
<id>90060937</id>
<id>90060935</id>
<id>10000004</id>
<id>10000011</id>
<id>10000019</id>
<id>10000024</id>
<id>110000086</id>
<id>110000037</id>
<id>110000001</id>
<id>110000012</id>
</GetInfoFromUid_Request_1>
</Body>
</Envelope>

```

XML Sample Response - Get Information from UID

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/01/12/webservices/
      rkd/RefInfo_1/GetInfoFromUid_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <GetInfoFromUid_Response_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/RefInfo_1" containedLanguages="en-us,
      ru">
      <uidInfo containedLanguages="ru,en-us">
        <ui uid="10000004">Компания</ui>
        <ui uid="10000011">Отрасль</ui>
        <ui uid="10000019">Экономика</ui>
        <ui uid="10000024">Инвестиционная стратегия</ui>
        <ui uid="110000001">африкаанс</ui>
        <ui uid="110000012">арабский (Йемен)</ui>
        <ui uid="110000037">английский (США)</ui>
        <ui uid="110000086">русский</ui>
        <ui uid="1">Multex Task Queue Monitoring</ui>
        <ui uid="2">Merrill Lynch</ui>
        <ui uid="3">Bankers Trust Australia Limited</ui>
        <ui uid="6">Goldman Sachs</ui>
        <ui uid="27">Banc of America Securities</ui>
        <ui uid="5451">Bear Stearns & Co. Inc.</ui>
        <ui uid="60000394">American Region</ui>
        <ui uid="60000398">Africa/Middle East</ui>
        <ui uid="60000411">Africa</ui>
        <ui uid="60000428">America-Emerging</ui>
        <ui uid="60000429">America-Developed</ui>
        <ui uid="90060935">All Ordinaries excl Financial Services (Australia/NZ)</ui>
        <ui uid="90060936">20 Leaders (Australia/NZ)</ui>
        <ui uid="90060937">50 Leaders (Australia/NZ)</ui>
      </uidInfo>
    </GetInfoFromUid_Response_1>
  </Body>
</Envelope>

```



38.7 Get Information from UID, Extended (GetInfoFromUidEx_1)

The GetInfoFromUidEx_1 request is similar to the GetInfoFromUid_1 request, only it has two additional common search criteria that allow you to separate the information by language and include duplicates into the response.

See also section Get Information from UID (GetInfoFromUid_1).

The following is an example of GetInfoFromUidEx_1 request.

XML Sample Request - Get Information from UID, Extended

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/RefInfo/RefInfo.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/RefInfo_1/GetInfoFromUidEx_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetInfoFromUidEx_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/RefInfo_1" acceptLanguage="ru,ja,es,en,fr">
      <id>1</id>
      <id>2</id>
      <id>3</id>
      <id>6</id>
      <id>27</id>
      <id>5451</id>
      <id>60000411</id>
      <id>60000398</id>
      <id>60000429</id>
      <id>60000428</id>
      <id>60000394</id>
      <id>90060936</id>
      <id>90060937</id>
      <id>90060935</id>
      <id>10000004</id>
      <id>10000011</id>
      <id>10000019</id>
      <id>10000024</id>
      <id>110000086</id>
      <id>110000037</id>
      <id>110000001</id>
      <id>110000012</id>
    </GetInfoFromUidEx_Request_1>
  </Body>
</Envelope>
```

XML Sample Response - Get Information from UID, Extended

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/01/12/webservices/rkd/RefInfo_1/GetInfoFromUidEx_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <GetInfoFromUid_Response_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/RefInfo_1" containedLanguages="en-us,ru">
      <uidInfo containedLanguages="ru,en-us">
        <ui uid="10000004">Компания</ui>
        <ui uid="10000011">Отрасль</ui>
        <ui uid="10000019">Экономика</ui>
        <ui uid="10000024">Инвестиционная стратегия</ui>
      </uidInfo>
    </GetInfoFromUid_Response_1>
  </Body>
</Envelope>
```



```

    <ui uid="110000001">африкаанс</ui>
    <ui uid="110000012">арабский (Йемен)</ui>
    <ui uid="110000037">английский (США)</ui>
    <ui uid="110000086">русский</ui>
    <ui uid="1">Multex Task Queue Monitoring</ui>
    <ui uid="2">Merrill Lynch</ui>
    <ui uid="3">Bankers Trust Australia Limited</ui>
    <ui uid="6">Goldman Sachs</ui>
    <ui uid="27">Banc of America Securities</ui>
    <ui uid="5451">Bear Stearns & Co. Inc.</ui>
    <ui uid="60000394">American Region</ui>
    <ui uid="60000398">Africa/Middle East</ui>
    <ui uid="60000411">Africa</ui>
    <ui uid="60000428">America-Emerging</ui>
    <ui uid="60000429">America-Developed</ui>
    <ui uid="90060935">All Ordinaries excl Financial Services (Australia/NZ)</ui>
    <ui uid="90060936">20 Leaders (Australia/NZ)</ui>
    <ui uid="90060937">50 Leaders (Australia/NZ)</ui>
  </uiInfo>
</GetInfoFromUid_Response_1>
</Body>
</Envelope>

```

38.8 Get Intelligent Categorization Information (IcatGetInfo_1)

The IcatGetInfo_1 request can be used to retrieve information about different criteria:

- CtSubjects Criteria
- Disciplines Criteria
- Reasons Criteria
- Report Styles Criteria

This request also allows you to sort criteria by Name, Global Code, Local Code and Unspecified. See section Understanding Reuters Knowledge Direct API Codes for more details about codes.

The following is an example of IcatGetInfo_1 request.

XML Sample Request - Get Intelligent Categorization Information

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/RefInfo/RefInfo.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/01/12/webservices/rkd/RefInfo_1/IcatGetInfo_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <IcatGetInfo_Request_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/RefInfo_1">
      <ctSubjectsCriteria/>
      <disciplinesCriteria sortBy="byGlobalCode"/>
      <reasonsCriteria/>
      <rptStylesCriteria sortBy="byLocalCode"/>
    </IcatGetInfo_Request_1>
  </Body>
</Envelope>

```

XML Sample Response - Get Intelligent Categorization Information

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>

```



```
<Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/01/12/webservices/
rkd/RefInfo_1/IcatGetInfo_1_Reply</Action>
<RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
</Header>
<Body>
  <IcatGetInfo_Response_1 xmlns="http://www.reuters.com/ns/2008/01/12/webservices/rkd/RefInfo_1">
    <ctSubjects />
    <disciplines>
      <icat_info_record gc="130000001" lc="DIS_ANQN">
        <name>TECHNICAL/QUANTITATIVE ANALYSIS</name>
      </icat_info_record>
      <icat_info_record gc="130000002" lc="DIS_FUND">
        <name>FUNDAMENTAL ANALYSIS</name>
      </icat_info_record>
      <icat_info_record gc="130000003" lc="DIS_STRT">
        <name>STRATEGIC ANALYSIS</name>
      </icat_info_record>
    </disciplines>
    <reasons>
      <icat_info_record gc="140000001" lc="REA_COMM">
        <name>COMMENTARY/OVERVIEW/SUMMARY</name>
      </icat_info_record>
      <icat_info_record gc="140000002" lc="REA_FORE">
        <name>FORECAST</name>
      </icat_info_record>
      ...
      <icat_info_record gc="140000011" lc="REA_MEET">
        <name>MEETINGS/CONFERENCE NOTICE</name>
      </icat_info_record>
    </reasons>
    <rptStyles>
      <icat_info_record gc="150000001" lc="RPT_CM">
        <name>COMMODITY RESEARCH</name>
      </icat_info_record>
      <icat_info_record gc="150000002" lc="RPT_CO">
        <name>COMPANY (EQUITY) REPORTS</name>
      </icat_info_record>
      ...
      <icat_info_record gc="150000012" lc="RPT_TT">
        <name>MUTUAL FUNDS / TRUSTS RESEARCH</name>
      </icat_info_record>
    </rptStyles>
  </IcatGetInfo_Response_1>
</Body>
</Envelope>
```



chapter 39 Research On Demand

This chapter describes how to use the Thomson Reuters Research API to implement advanced document searching. These features are often referred to as "Research On Demand" techniques.

The appropriate Research-On-Demand (ROD) billing records are created based on the user's entitlements and the reseller code (agent ID), if appropriate.

The following operations are available through the Thomson Reuters Research on Demand service:

- **Calculate Document Price** (CalculateDocPrice_1) - calculates billing based on 24 hour discount.
- **Get Price per Page** (GetPricePerPage_1) - returns price per page.
- **Get Document Disclaimer** (GetDocDisclaimer_1) - retrieves the text which each contributor specifies to be displayed and accepted by each user buying PPV research.
- **Check per Page Download** (CheckPerPageDownload_1) - checks if a document can be retrieved per pages.

39.1 Authentication/Authorization, Service Endpoint, and Required Headers

Authorization

All requests to the Thomson Reuters Research on Demand service require an authorization token. For details, see section Understanding Authentication Tokens.

Authentication

Thomson Reuters Research on Demand uses Reuters impersonation tokens for each effective user. In this case, Thomson Reuters must create each user before your application authenticates them. Unmanaged effective users are not supported in Thomson Reuters Research on Demand.

For additional information, see section Creating a Token.

Service Endpoint

Thomson Reuters Research on Demand Endpoint

<http://api.rkd.reuters.com/api/ResearchOnDemand/ResearchOnDemand.svc>

Required Header

Required HTTP Headers

POST /ResearchOnDemand/ResearchOnDemand.svc HTTP/1.1
 Content-Type: application/soap+xml
 Host: api.rkd.reuters.com
 Content-Length: [length]

39.2 WSDL

WSDL:

http://api.rkd.reuters.com/schemas/ResearchOnDemand/wSDL/ResearchOnDemand_1_HttpAndRKDToken.wsdl



39.3 Calculate Document Price (CalculateDocPrice_1)

The document price returned by the DocInfo_1 request (see also Including the Undiscounted Document Price in the Metadata section in Document Search chapter) is the undiscounted price. However, certain resellers may offer discounts. In addition, "On-Demand" sites generally offer a "24 hour discount". With the "24 hour discount" clients can retrieve a document multiple times in 24 hours and Thomson Reuters only charges for the first download.

You can use the CalculateDocPrice_1 request to retrieve the discounted document price of a page, particular pages or the entire document.

The example below requests discounted document price for pages 2, 5 and 7 in document with 47259608 docID:

XML Sample Request - Calculating Document Price

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/ResearchOnDemand/ResearchOnDemand.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/10/01/webservices/rkd/ResearchOnDemand_1/CalculateDocPrice_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <CalculateDocPrice_Request_1 xmlns="http://www.reuters.com/ns/2009/10/01/webservices/rkd/ResearchOnDemand_1">
      <DocumentItem docID="47259608">
        <PageItem PageNumber="2" />
        <PageItem PageNumber="5" />
        <PageItem PageNumber="7" />
      </DocumentItem>
    </CalculateDocPrice_Request_1>
  </Body>
</Envelope>
```

Element	Value
Request Type	(Optional) Defines either page numbers or page ranges: - page number (f.e. <PageItem PageNumber="2" />); - page range (f.e. <PageRange>1-5;7,9</PageRange>)

The response returns both the original price and the calculated price for the document and page:

XML Sample Response - Calculating Document Price

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2009/10/01/webservices/rkd/ResearchOnDemand_1/CalculateDocPrice_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <CalculateDocPrice_Response_1 xmlns="http://www.reuters.com/ns/2009/10/01/webservices/rkd/ResearchOnDemand_1">
      <DocumentItem docID="47259608" originalPrice="1000" calculatedPrice="1000">
        <PageItem pageNumber="2" originalPrice="800" calculatedPrice="800"></PageItem>
        <PageItem pageNumber="5" originalPrice="800" calculatedPrice="0"></PageItem>
        <PageItem pageNumber="7" originalPrice="800" calculatedPrice="200"></PageItem>
      </DocumentItem>
    </CalculateDocPrice_Response_1>
  </Body>
</Envelope>
```

Note: The document price returned in the response is in cents. You must code your application to display a meaningful amount



to your users. For example, if the response indicates 4950, your application should display \$49.50.

Interpretation of negative values returned by the response

When user requests price for page numbers or a list of pages, the CalculateDocPrice_1 request might return negative values and description why the price per page is negative.

XML Sample Response 1

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2009/10/01/webservices/
rkd/ResearchOnDemand_1/CalculateDocPrice_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <CalculateDocPrice_Response_1 xmlns="http://www.reuters.com/ns/2009/10/01/webservices/rkd/ResearchOnDemand_1">
      <DocumentItem docID="57519670" price="100000">
        <PageItem pageNumber="1" price="-1" priceDescription="price is not found"></PageItem>
        <PageItem pageNumber="2" price="-1" priceDescription="price is not found"></PageItem>
      </DocumentItem>
    </CalculateDocPrice_Response_1>
  </Body>
</Envelope>
```

The response might also return generic SOAP fault if prices are not found:

XML Sample Response - SOAP Fault Example

```
<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" s:mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/
rkd/Faults_1/Fault_1_Reply</a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <s:Fault>
      <s:Code>
        <s:Value>s:Receiver</s:Value>
        <s:Subcode>
          <s:Value xmlns:a="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Faults_1">a:ResearchOnDemand_InternalError
          </s:Value>
        </s:Subcode>
      </s:Code>
      <s:Reason>
        <s:Text xml:lang="en-US">Total price and price per page are not found (DocIds:43853826)</s:Text>
      </s:Reason>
      <s:Detail>
        <ClientErrorReference xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Faults_1" xmlns:i="http://www.w3.
org/2001/XMLSchema-instance">
          <Timestamp>2011-11-16T12:05:25.0149543Z</Timestamp>
          <ErrorReference>f6a3be13bcb447bda80839b58558039a</ErrorReference>
          <ServerReference>89E6EB67BC67E98940C6B9F562FC446980760E69457AC029</ServerReference>
        </ClientErrorReference>
      </s:Detail>
    </s:Fault>
  </s:Body>
</Envelope>
```

The following table below lists all possible negative values and their descriptions:

Total Price	Price Per Page	Error Description
-1	-1	Total price and price per page are not found (DocumentID="DocID").
-1	-4	Total price is not found and document is not allowed to be downloaded by pages or locked (DocumentID="DocID").



-2	-2	User is not entitled for the document (DocumentID="DocID").
-4	-4	The document is not found (DocumentID="DocID").

39.4 Get Price per Page (GetPricePerPage_1)

Use the GetPricePerPage_1 request to retrieve price per page for documents with particular IDs.

The example below requests price per page for documents with '57792777' and '57635849' IDs:

XML Sample Request - Retrieving Price per Page
<pre><Envelope xmlns="http://www.w3.org/2003/05/soap-envelope"> <Header> <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/ResearchOnDemand/ResearchOnDemand.svc</To> <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID> <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/10/01/webservices/rkd/ResearchOnDemand_1/GetPricePerPage_1</Action> <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1"> <ApplicationID>[AppID]</ApplicationID> <Token>[service token]</Token> </Authorization> </Header> <Body> <GetPricePerPage_Request_1 xmlns="http://www.reuters.com/ns/2009/10/01/webservices/rkd/ResearchOnDemand_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"> <DocumentID>57792777</DocumentID> <DocumentID>57635849</DocumentID> </GetPricePerPage_Request_1> </Body> </Envelope></pre>

The response returns the following information:

XML Sample Response - Retrieving Price per Page
<pre><Envelope xmlns="http://www.w3.org/2003/05/soap-envelope"> <Header> <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2009/10/01/webservices/rkd/ResearchOnDemand_1/GetPricePerPage_1_Reply</Action> <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo> </Header> <Body> <GetPricePerPage_Response_1 xmlns="http://www.reuters.com/ns/2009/10/01/webservices/rkd/ResearchOnDemand_1"> <PricePerPage docID="47282605">0</PricePerPage> <PricePerPage docID="47259608">800</PricePerPage> </GetPricePerPage_Response_1> </Body> </Envelope></pre>

Note: The document price returned in the response is in cents. You must code your application to display a meaningful amount to your users. For example, if the response indicates 4950, your application should display \$49.50.

Note: When user requests price for page numbers or a list of pages, the GetPricePerPage_1 request might return negative values and description why the price per page is negative. See the table below with all possible negative values and their descriptions:

Total Price	Price Per Page	Error Description
-1	-1	Total price and price per page are not found (DocumentID="DocID").
-1	-4	Total price is not found and document is not allowed to be downloaded by pages or locked (DocumentID="DocID").



-2	-2	User is not entitled for the document (DocumentID="DocID").
-4	-4	The document is not found (DocumentID="DocID").

XML Sample Response with Negative Value

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2009/10/01/webservices/
rkd/ResearchOnDemand_1/GetPricePerPage_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <GetPricePerPage_Response_1 xmlns="http://www.reuters.com/ns/2009/10/01/webservices/rkd/ResearchOnDemand_1">
      <PricePerPage docID="57635849" priceDescription="document is not allowed to be downloaded by pages or locked">-4</
PricePerPage>
      <PricePerPage docID="57792777">0</PricePerPage>
    </GetPricePerPage_Response_1>
  </Body>
</Envelope>
```

39.5 Get Document Disclaimer (GetDocDisclaimer_1)

Particular research contributors require resellers of their research to display disclaimer text which users must acknowledge before purchasing/downloading.

The GetDocDisclaimer_1 request retrieves the text which particular contributor specifies to be displayed and accepted by each user before buying PPV (Pay-per-View) research documents.

The sample request below specifies to retrieve document disclaimer for contributor with '12345' ID:

XML Sample Request - Retrieving Document Disclaimer

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/ResearchOnDemand/ResearchOnDemand.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/10/01/webservices/rkd/
ResearchOnDemand_1/GetDocDisclaimer_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetDocDisclaimer_Request_1 xmlns="http://www.reuters.com/ns/2009/10/01/webservices/rkd/ResearchOnDemand_1">
      <Contributor ID="12345" />
    </GetDocDisclaimer_Request_1>
  </Body>
</Envelope>
```

The response returns document disclaimer for the specified contributor:

XML Sample Response - Retrieving Document Disclaimer

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2009/10/01/webservices/
rkd/ResearchOnDemand_1/GetDocDisclaimer_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <GetDocDisclaimer_Response_1 xmlns="http://www.reuters.com/ns/2009/10/01/webservices/rkd/ResearchOnDemand_1">
```



```

    <Disclaimer>ALTHOUGH REUTERS MAKES REASONABLE EFFORTS TO ENSURE THE ACCURACY AND RELIABILITY OF THE SERVICES,
    NEITHER REUTERS NOR ANY INFORMATION PROVIDER OR OTHER THIRD PARTY SUPPLIER GUARANTEES SUCH ACCURACY OR
    RELIABILITY, AND SUBSCRIBER ACKNOWLEDGES THAT REUTERS, ITS EMPLOYEES, AGENTS, CONTRACTORS, SUB-CONTRACTORS,
    INFORMATION PROVIDERS AND OTHER THIRD PARTY SUPPLIERS WILL NOT BE HELD LIABLE FOR ANY DAMAGES SUFFERED OR
    INCURRED BY SUBSCRIBER, ANY CUSTOMER OF SUBSCRIBER OR ANY OTHER PERSON OR ENTITY ARISING OUT OF ANY FAULT,
    INTERRUPTION OR DELAY IN ANY SERVICE OR OUT OF ANY INACCURACY, ERROR OR OMISSION IN ANY SERVICE SUPPLIED TO
    SUBSCRIBER, HOWEVER SUCH FAULTS, INTERRUPTIONS, DELAYS, INACCURACIES, ERRORS OR OMISSIONS ARISE, UNLESS DUE TO
    REUTERS GROSS NEGLIGENCE OR WILLFUL MISCONDUCT.</Disclaimer>
  </GetDocDisclaimer_Response_1>
</Body>
</Envelope>

```

Note: If your application is contractually obligated to display the appropriate disclaimers, make sure that users of your application read the disclaimer before they purchase/download the document.

39.6 Check per Page Download (CheckPerPageDownload_1)

Use the CheckPerPageDownload_1 request to check whether particular documents can be retrieved per pages.

The sample request below checks whether it is possible to download documents with "57635849" and "57792777" DocIDs per page:

XML Sample Request - Checking per Page Downloads

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/ResearchOnDemand/ResearchOnDemand.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/10/01/webservices/rkd/
    ResearchOnDemand_1/CheckPerPageDownload_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <CheckPerPageDownload_Request_1 xmlns="http://www.reuters.com/ns/2009/10/01/webservices/rkd/ResearchOnDemand_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance">
      <Document ID="57635849"/>
      <Document ID="57792777"/>
    </CheckPerPageDownload_Request_1>
  </Body>
</Envelope>

```

The response returns the following information:

XML Sample Response - Checking per Page Downloads

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2009/10/01/webservices/
    rkd/ResearchOnDemand_1/CheckPerPageDownload_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <CheckPerPageDownload_Response_1 xmlns="http://www.reuters.com/ns/2009/10/01/webservices/rkd/ResearchOnDemand_1">
      <AllowPerPageDownload ContributorID="12345">true</AllowPerPageDownload>
      <AllowPerPageDownload ContributorID="4205">true</AllowPerPageDownload>
      <AllowPerPageDownload ContributorID="2">false</AllowPerPageDownload>
    </CheckPerPageDownload_Response_1>
  </Body>
</Envelope>

```



Note: The CheckPerPageDownload_1 request will return the following error if the whole document cannot be downloaded:

XML Sample Response - SOAP Fault Example

```
<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" s:mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/
rkd/Faults_1/Fault_1_Reply</a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <s:Fault>
      <s:Code>
        <s:Value>s:Receiver</s:Value>
        <s:Subcode>
          <s:Value xmlns:a="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Faults_1">a:ResearchOnDemand_InternalError
        </s:Value>
        </s:Subcode>
      </s:Code>
      <s:Reason>
        <s:Text xml:lang="en-US">Total price and price per page are not found (DocIds:43853826)</s:Text>
      </s:Reason>
      <s:Detail>
        <ClientErrorReference xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Faults_1" xmlns:i="http://www.w3.
org/2001/XMLSchema-instance">
          <Timestamp>2011-11-16T12:05:25.0149543Z</Timestamp>
          <ErrorReference>f6a3be13bcb447bda80839b58558039a</ErrorReference>
          <ServerReference>89E6EB67BC67E98940C6B9F562FC446980760E69457AC029</ServerReference>
        </ClientErrorReference>
      </s:Detail>
    </s:Fault>
  </s:Body>
</Envelope>
```

39.7 Get Billing Information (GetBillingInfo_1)

Use the GetBillingInfo_1 request to know which pages are billable in each report (document) and which are not.

The example below retrieves billing information for the specified reports (documents):

XML Sample Request - Retrieving Billing Information

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/ResearchOnDemand/ResearchOnDemand.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/10/01/webservices/rkd/
ResearchOnDemand_1/GetBillingInfo_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetBillingInfo_Request_1 xmlns="http://www.reuters.com/ns/2009/10/01/webservices/rkd/ResearchOnDemand_1" xmlns:xsi="http://
www.w3.org/2001/XMLSchema-instance">
      <documentIdList>
        <docID>46577294</docID>
        <docID>46637346</docID>
        <docID>47674231</docID>
      </documentIdList>
    </GetBillingInfo_Request_1>
  </Body>
</Envelope>
```

The response returns the following information:



XML Sample Response - Retrieving Billing Information

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2009/10/01/webservices/
rkd/ResearchOnDemand_1/GetBillingInfo_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <GetGetBillingInfo_Response_1 xmlns="http://www.reuters.com/ns/2009/10/01/webservices/rkd/ResearchOnDemand_1">
      <documents>
        <document docID="46577294" numPages="8" numNonBillablePages="1">
          <nonBillablePages>
            <page>7</page>
          </nonBillablePages>
        </document>
        <document docID="46637346" numPages="8" numNonBillablePages="0">
          <nonBillablePages></nonBillablePages>
        </document>
        <document docID="47674231" numPages="0" numNonBillablePages="0">
          <nonBillablePages></nonBillablePages>
        </document>
      </documents>
    </GetGetBillingInfo_Response_1>
  </Body>
</Envelope>
```

The response returns total number of pages for the specified document, number of non-billable pages and their numbers.



chapter 40 Thomson Reuters Search

Thomson Reuters Search web service could be described as a search engine that searches on Thomson Reuters financial information.

Primary use case of Search service is as a symbol resolution engine. That is, use search to resolve company identifiers (for example, a company name) into the identifiers required for other APIs. In most cases, this identifier is RIC.

Thomson Reuters recommends using the single service user to make the requests (rather than each effective user); this approach simplifies the application and the entitlements structure required to support the search requests.

The following operations are available in this web service:

Name	Description
Search All	Searches any item in the index.
Organization	Searches Organizations involved in the financial markets.
Commodity Quote	Searches Commodity Quotes.
Derivative Instruments	Searches on any derivative instrument.
Derivative Quote	Searches on any derivative quote, additional filter or query term required to limit to Option, Future, Warrant etc.
Equity Quote	Searches Fund Quotes.
Fund Quote	Searches on all Fund Quotes.
Government and Corporate Bond Instruments	Searches Government and Corporate Bond instruments.
Index Instruments	Searches Indices at Instrument level.
Index Quote	Searches Quotes on indices.

Note: Thomson Reuters Search allows you to use Chinese or Japanese characters when searching for data.

40.1 Authentication and Authorization

Authorization

All requests to the Thomson Reuters Search web service require an authorization token. For details, see section Understanding Authentication Tokens.

Authentication

Thomson Reuters Search uses Reuters impersonation tokens for each effective user. In this case, Thomson Reuters must create each user before your application authenticates them. Unmanaged effective users are not supported in Thomson Reuters Search.

For additional information, see section Creating a Token for more information on creating a Service Token.

40.2 Common Elements

This section outlines and explains elements that are used in all operations of the Thomson Reuters Search web service.

The following attributes can be used in the body of a request for all operations:

Attribute	Description
UnentitledAccess	If set to True, all results are returned, irrespective of user access rights. If set to False, only those results are returned, to which the user is entitled.

UseEnglishOnly	If you set this attribute to True, when searching by name, the DocumentTitle element only in the default language is returned. If set to False or not specified, multiple DocumentTitle elements are returned, in all available languages.

For example:

XML Sample Request with UseEnglishOnly set to True

```
<GetEquityQuote_Request_1 UseEnglishOnly="true" UnentitledAccess="true" xmlns="http://www.reuters.com/ns/2006/05/01/
webservices/rkd/Search/EquityQuote_1">
  <QueryHeader xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes">
    <MaxCount>5</MaxCount>
    <Pivot>0</Pivot>
    <Timeout>0</Timeout>
    <Spellcheck>On</Spellcheck>
  </QueryHeader>
  <Query>
    <Search Include="true" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/RequestDefaultFields">
      <StringValue Value="Microsoft" Negated="false" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
QuerySpecDatatypes" />
    </Search>
  </Query>
</GetEquityQuote_Request_1>
```

The response returns the DocumentTitle element only in English:

XML Sample Response with UseEnglishOnly set to True

```
<ns5:GetEquityQuote_Response_1 xmlns:ns5="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_1" xmlns:
ns1="http://www.reuters.com/ns/frdsearch/1.0/CommonDatatypes" xmlns:ns2="http://www.reuters.com/ns/2006/05/01/webservices/rkd/
Search/ResultSpecDatatypes" xmlns:ns3="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields" xmlns:
ns4="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_ResultSpec_1">
  <ns2:ResultHeader>
    <ns2:FirstHit>1</ns2:FirstHit>
    <ns2:LastHit>5</ns2:LastHit>
    <ns2:Hits>5</ns2:Hits>
    <ns2:TotalHits>56</ns2:TotalHits>
    <ns2:ExecutionTime>78</ns2:ExecutionTime>
    <ns2:Duration>141</ns2:Duration>
  </ns2:ResultHeader>
  <ns2:NavigatorList></ns2:NavigatorList>
  <ns5:Result>
    <ns5:Hit>
      <ns3:BusinessEntity>QUOTE.EQUITY</ns3:BusinessEntity>
      <ns3:PI>733337</ns3:PI>
      <ns3:DocumentTitle>
        <ns2:Value>Microsoft Corp, Ordinary, Consolidated Issue Listed on NASDAQ Global Select Market</ns2:Value>
        <ns2:SubjectName>Microsoft Corp</ns2:SubjectName>
        <ns2:SimpleType>Ordinary</ns2:SimpleType>
        <ns2:Source>Consolidated Issue Listed on NASDAQ Global Select Market</ns2:Source>
      </ns3:DocumentTitle>
    </ns5:Hit>
    ...
  </ns5:Result>
</ns5:GetEquityQuote_Response_1>
```

The same request with UseEnglishOnly set to False:

XML Sample Request with UseEnglishOnly set to False

```
<GetEquityQuote_Request_1 UseEnglishOnly="false" UnentitledAccess="true" xmlns="http://www.reuters.com/ns/2006/05/01/
webservices/rkd/Search/EquityQuote_1">
  <QueryHeader xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes">
    <MaxCount>5</MaxCount>
    <Pivot>0</Pivot>
    <Timeout>0</Timeout>
    <Spellcheck>On</Spellcheck>
  </QueryHeader>
```




```

<Query>
  <Search Include="true" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/RequestDefaultFields">
    <StringValue Value="Microsoft" Negated="false" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
      QuerySpecDatatypes" />
  </Search>
</Query>
</GetEquityQuote_Request_1>

```

The response returns DocumentTitle elements in all available languages:

XML Sample Response with UseEnglishOnly set to False

```

<ns5:GetEquityQuote_Response_1 xmlns:ns5="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_1"
  xmlns:ns1="http://www.reuters.com/ns/frdsearch/1.0/CommonDatatypes" xmlns:ns2="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes"
  xmlns:ns3="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields"
  xmlns:ns4="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_ResultSpec_1">
  <ns2:ResultHeader>
    <ns2:FirstHit>1</ns2:FirstHit>
    <ns2:LastHit>5</ns2:LastHit>
    <ns2:Hits>5</ns2:Hits>
    <ns2:TotalHits>56</ns2:TotalHits>
    <ns2:ExecutionTime>62</ns2:ExecutionTime>
    <ns2:Duration>125</ns2:Duration>
  </ns2:ResultHeader>
  <ns2:NavigatorList></ns2:NavigatorList>
  <ns5:Result>
    <ns5:Hit>
      <ns3:BusinessEntity>QUOTE.EQUITY</ns3:BusinessEntity>
      <ns3:PI>733337</ns3:PI>
      <ns3:DocumentTitle>
        <ns2:Value>Microsoft Corp, Ordinary, Consolidated Issue Listed on NASDAQ Global Select Market</ns2:Value>
        <ns2:SubjectName>Microsoft Corp</ns2:SubjectName>
        <ns2:SimpleType>Ordinary</ns2:SimpleType>
        <ns2:Source>Consolidated Issue Listed on NASDAQ Global Select Market</ns2:Source>
      </ns3:DocumentTitle>
      <ns3:DocumentTitle Lang="ja-Hani">
        <ns2:Value>マイクロソフト・コーポレーション, Ordinary, Consolidated Issue Listed on NASDAQ Global Select Market</ns2:Value>
        <ns2:SubjectName>マイクロソフト・コーポレーション</ns2:SubjectName>
        <ns2:SimpleType>Ordinary</ns2:SimpleType>
        <ns2:Source>Consolidated Issue Listed on NASDAQ Global Select Market</ns2:Source>
      </ns3:DocumentTitle>
      <ns3:DocumentTitle Lang="ja-Kana">
        <ns2:Value>マイクロソフトコーポレーション, Ordinary, Consolidated Issue Listed on NASDAQ Global Select Market</ns2:Value>
        <ns2:SubjectName>マイクロソフトコーポレーション</ns2:SubjectName>
        <ns2:SimpleType>Ordinary</ns2:SimpleType>
        <ns2:Source>Consolidated Issue Listed on NASDAQ Global Select Market</ns2:Source>
      </ns3:DocumentTitle>
      <ns3:DocumentTitle Lang="ja-Hira">
        <ns2:Value>まいくろそふとこーぽれーしょん, Ordinary, Consolidated Issue Listed on NASDAQ Global Select Market</ns2:Value>
        <ns2:SimpleType>Ordinary</ns2:SimpleType>
        <ns2:Source>Consolidated Issue Listed on NASDAQ Global Select Market</ns2:Source>
      </ns3:DocumentTitle>
    </ns5:Hit>
    ...
  </ns5:Result>
</ns5:GetEquityQuote_Response_1>

```

40.2.1 Query Header

Header information is common to every web service implemented for the Search service. The parameters in this section affect the way in which the query will be processed by the search engine. If this section is left out default values are passed. The following is an example of the Header section with default values:

XML Sample Request - Query Header Section

```

<QueryHeader xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes">
  <MaxCount>10</MaxCount>
  <Pivot>0</Pivot>
  <Timeout>0</Timeout>
  <Spellcheck>On</Spellcheck>
</QueryHeader>

```

Attribute	Description
Max Count	The maximum number of records to be returned by this query. The max number is set to 4020 and the



	service will throw an exception if it is more.
Pivot	The offset of the first record returned from the total identified by the search engine.
Timeout	The timeout (in seconds) to allow before the query returns an empty result. Default value is 10 seconds.
Spellcheck	Whether the search engine performs spell checking on the query. This value only affects searches made outside of a criteria value (on the Name, Code or NameSymbol fields). The possible values for Spellcheck are: • On • Off • Suggest

40.2.2 Query

Each Query command contains Expression fields and Value fields.

An Expression has a number of characteristics that you will be able to specify. These can be defined as:

- The expression can include a number of values that could be matched for the query.
- Indicates what information is returned in the response through the use of Include attribute in each field.
- The search engine may provide additional information for a particular field, such as Navigation.
- It may be possible to sort a set of results on a particular field.

Note: Query must generally be used only for requests against the default field sets: "Search", "Name" and "Code" as these fields allow ranking to be performed by the search engine based on how well the user query matches the content of these fields. For more information see section Searchable Field Types.

Note: The types of request which contain many terms as a part of the <Query/> element are not executed.

E.g: If your application sends requests such as:

XML Sample Request

```
<Query>
  <Code>
    <SymbolValue value="VOD.L" />
    <SymbolValue value="BT.L" />
  </Code>
</Query>
```

This is no longer considered to be a valid "query". Because there are multiple values requested, it is considered to be a code lookup and as such should be specified in the <Filter/> like:

XML Sample Request

```
<Filter>
  <Code>
    <SymbolValue value="VOD.L" />
    <SymbolValue value="BT.L" />
  </Code>
</Filter>
```

This is not to say that <Code/> is not a relevant <Query/> element. Searches are still possible on a code value. For example:

XML Sample Request

```
<Query>
  <Code>
    <SymbolValue value="IBM.N" />
  </Code>
</Query>
```



The following attributes can be assigned to the expression:

Attribute	Description
Sort	Only available for fields that are configured as sortable by the search engine. If a sort order is not specified Search results are returned in a ranked order. This is dictated by a static rank value defined for each document according to a set of business rules and a dynamic ranking created at run time designed to boost documents that are the best match for the query.
Navigation	Only available for fields for which the search engine is configured to provide analytics on a set of results.
Include	You would set this value to true for a field you want to be returned in the response. You can set this to be returned in the response without specifying query criteria.

In this example along with setting the search for keyword "microsoft" it is also indicated that the response should return the values for AverageShareFound and CommonName by setting their include attributes to true.

Note: Only fields with Include attribute set to true will be included in the response.

XML Sample Request - Query Section use of Include Attribute

```
<Query>
  <Search xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/RequestDefaultFields" Include="true" >
    <StringValue xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes" Value="microsoft" />
  </Search>
  <CommonName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/RequestDefaultFields" Include="true" />
</Query>
```

In the following example you can see Expressions outlined in bold:

XML Sample Request - Query Section

```
<Query>
  <Search xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/RequestDefaultFields"
    Include="true" >
    <StringValue xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes" Value="microsoft" />
  </Search>
</Query>
```

Value fields represent a single expression and contain the actual value to be included in the criteria for the search. Each data type has a specific value container as shown:

Attribute	Description
Value	The value to match for this field.
Negated	Specifies that results should not contain this value.
ExpressionType	Only available for numeric and date fields. To allow the user to specify how the field will be matched by the search engine.
UpperValue	Only available for numeric and date fields. When an expression type of "Between" is specified, the user will be required to specify both the upper and lower bounds for the match. In these cases, "Value" is interpreted as the lower bound and "UpperValue" will specify the upper boundary of the range expression.
ExactMatch	Only available for symbol fields. This flag specifies that the search engine should perform an exact match against the field. Support for this feature is specified by the search engine and is not available by default for all symbol fields. This being the case, specifying that an exact match should be performed will not always guarantee that an exact match was performed by the search engine. Current support for this feature is only available for RIC fields.

XML Sample Request - Query Section

```
<Query>
  <Search xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/RequestDefaultFields" Include="true" >
    <StringValue xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes"
      Value="microsoft" />
  </Search>
</Query>
```



40.2.3 Filter

Values can be specified in a Filter rather than a Query when they are required to only limit the universe of results available to the query. The Filter parameter is typically used for query terms that relate to metadata, such as specifying the collection(s), language scope, document type or category for the query. One reason for using the Filter parameter rather than query is the lower overhead and faster execution time.

Filters do not perform query transformation processing, such as approximate match. The terms will impact which documents that are returned (by limiting the scope of the query), but will not impact the ranking/sorting of the results. For example, the quality of the match (e.g. related to proximity) for filter terms will not impact the rank of the document. Features such as sorting and navigation are not available on expressions specified as part of a filter either.

Note: Like with fields in the query section it is also possible to set the Include attribute to true to include the field in the response.

XML Sample Request - Filter Section Example 1

```
<GetGovCorpInst_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/GovCorpInst_1">
  <Filter>
    <IssueDate xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_QuerySpec_1"
      Include="true" Sort="Ascending" Navigation="true">
      <DateValue xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes"
        ExpressionType="LessThan" Value="2001-03-07" Negated="false" />
    </IssueDate>
  </Filter>
  <Query>
    <Search xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/RequestDefaultFields" Include="true">
      <StringValue xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes" Value="cisco" />
    </Search>
  </Query>
</GetGovCorpInst_Request_1>
```

XML Sample Request - Filter Section Example 2

```
<Searchall_1_Request xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  xmlns="http://www.reuters.com/ns/frdsearch/1.0/Searchall_1_Request">
  <Filter>
    <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/RequestDefaultFields">
      <StringValue Value="QUOTE" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
        QuerySpecDatatypes" />
    </BusinessEntity>
    <AssetCategory xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_1_QuerySpec">
      <StringValue Value="ORD" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
        QuerySpecDatatypes" />
    </AssetCategory>
  </Filter>
  <Query>
    <Search Include="true" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/RequestDefaultFields">
      <StringValue Value="Reuters" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes" />
    </Search>
    <BusinessEntity Include="true" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/RequestDefaultFields" />
    <AssetCategory Include="true" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_1_QuerySpec" />
  </Query>
</Searchall_1_Request>
```

Note: The types of request which contain many terms as a part of the <Query/> element are not executed.

E.g: If your application sends requests such as:

XML Sample Request

```
<Query>
```



```

<Code>
  <SymbolValue value="IBM.N" />
  <SymbolValue value="BT.L" />
</Code>
</Query>

```

This is no longer considered to be a valid "query". Because there are multiple values requested, it is considered to be a code lookup and as such should be specified in the <Filter/> like:

XML Sample Request

```

<Filter>
  <Code>
    <SymbolValue value="VOD.L" />
    <SymbolValue value="BT.L" />
  </Code>
</Filter>

```

This is not to say that <Code/> is not a relevant <Query/> element. Searches are still possible on a code value. For example:

XML Sample Request

```

<Query>
  <Code>
    <SymbolValue value="CSCO.O" />
  </Code>
</Query>

```

40.2.4 Searchable Field Types

All searchable fields in the Thomson Reuters Search web service fall into one of the following field types:

- **RequestDefaultFields:** Fields that are included by default for all operation requests.
- **RequestOnlyFields:** Fields that only appear in a request not a response.
- **NameQualified:** Fields that are specific to individual operations.

Note: For a full listing of Fields and their Field Types refer to the XSD document.

40.2.5 Difference between Query and Filter in Thomson Reuters Search

Thomson Reuters Search uses the Query parameter to try and find as many matches in its database as possible. It tries alternate spellings, near matches, and will query against many different parameters in order to find good search results.

For example if you enter "Microsof 20 Put Warrant" in the Search parameter, Thomson Reuters Search will suggest Microsoft despite the fact that it was spelt incorrectly. Once the spelling is corrected, it will search across a wide range of parameters until it finds that there are hits for Microsoft which are of asset class warrant, and of strike price 20.

Thomson Reuters Search uses the Filter parameter to try to remove from the search results things which you tell it you're not interested in. There is no intelligence applied to items you specify in the filter parameter. For example, if you specify that the exchange must be LSE, then Thomson Reuters Search will not return any results which don't have LSE as the Exchange, it will not try to second-guess you.

You should use **Query** in Thomson Reuters Search in the following cases:

1. When you have values for Name, Code and Search, because Query can have only those values specified.
2. When you want your input to be intelligently interpreted.
3. When you want to get near matches to the values you specify.
4. When you want to retrieve navigation for metadata.
5. When you want your results to be partially prioritised on how well they fit your query.



Use **Filter** when you:

1. Want to specify how the search results are to be cut down.
2. Do not want to apply any intelligence in search results.

40.3 Thomson Reuters Search Requests

This section provides examples on the use of the following Search operations:

Name	Web Service	Description
Search All	GetSearchall_1	Searches any item in the index.
Organization	GetOrganisation_1	Search for Organizations involved in the financial markets.
Commodity Quote	GetCommodityQuote_1	Searches Commodity Quotes.
Derivative Instruments	GetDerivativeInst_1	Searches on any derivative instrument.
Derivative Quote	GetDerivativeQuote_1	Searches on any derivative quote, additional filter or query term required to limit to Option, Future, Warrant etc.
Equity Quote	GetEquityQuote_1	Searches on all Equity Quotes.
Fund Quote	GetFundQuote_1	Searches Government and Corporate Bond instruments.
Government and Corporate Bond Instruments	GetGovCorpInst_1	Searches Government and Corporate Bond instruments.
Index Instruments	GetIndexInst_1	Searches Indices at Instrument level.
Index Quote	GetIndexQuote_1	Searches Quotes on indices.

40.3.1 SearchAll Request (GetSearchall_Request_1)

This operation searches and retrieves information on everything that is also covered in other operations separately:

- Organization
- Commodity Quote
- Derivative Instruments
- Derivative Quote
- Equity Quote
- Fund Quote
- Government and Corporate Bond Instruments
- Index Instruments
- Index Quote

The trade off for using Search All is the amount of time it takes to return the information. Since it searches through such a vast amount of data the time it takes to return a response is considerable more than if you used a specific Search operation. If you know the specific operation use it to get the necessary information quicker.

Note: PI in GetSearchall_1 request is an ID used by the Thomson Reuters search engine. PI's are unique identifiers for each item in the search index.

40.3.1.1 Service Endpoint and Required Headers

Service Endpoint

Thomson Reuters Search All Endpoint

<http://api.rkd.reuters.com/api/Search/Search.svc>

Required Header

Required HTTP Headers

POST /api/Search/Search.svc HTTP/1.1



Content-Type: application/soap+xml
 Host: api.rkd.reuters.com
 Content-Length: [length]

40.3.1.2 WSDL

WSDL:

http://api.rkd.reuters.com/schemas/Search/wsdl/Searchall_1_HttpAndRKDTOKEN.wsdl

40.3.1.3 Using Navigation

The following example searches for the name "Cisco" and returns RIC, Primary RIC, Asset Category and a break up of how many items belong in each asset class.

XML Sample Request - Search All Request with Navigate

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Search/Search.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_1/GetSearchall_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetSearchall_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_1">
      <Query>
        <Search xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/RequestDefaultFields" Include="true">
          <StringValue xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes" Value="cisco"
            Negated="false" />
        </Search>
        <AssetCategoryName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_QuerySpec_1"
          Include="true" Navigation="true" />
        <PrimaryRIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_QuerySpec_1" Include="true" />
        <RIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_QuerySpec_1" Include="true" />
      </Query>
    </GetSearchall_Request_1>
  </Body>
</Envelope>
```

XML Sample Response - Search All Response with Navigate

```
<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" s:mustUnderstand="1" http://www.reuters.com/ns/2006/05/01/webservices/rkd/
      http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_1/GetSearchall_1_Reply
    </a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetSearchall_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_1">
      <ResultHeader xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">
        <FirstHit>1</FirstHit>
        <LastHit>40</LastHit>
        <Hits>40</Hits>
        <TotalHits>308</TotalHits>
        <ExecutionTime>125</ExecutionTime>
        <Duration>188</Duration>
      </ResultHeader>
```



```

<NavigatorList xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">
  <StringNavigator FieldName="AssetCategoryName" HitCount="303" Entropy="1.208660933" Ratio="0.9837662338"
    Score="1.20866096" SampleCount="303">
    <Modifier Value="Equity/Equity/Index Warrant" Count="165" />
    <Modifier Value="United States" Count="106" />
    <Modifier Value="Israel" Count="5" />
    <Modifier Value="United Kingdom" Count="5" />
    <Modifier Value="Canada" Count="3" />
    ...
  </StringNavigator>
</NavigatorList>
<Result>
  <Hit>
    <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
      ResponseDefaultFields">ORGANISATION</BusinessEntity>
    <DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
      <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Cisco Systems Inc</
        Value>
      <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Cisco Systems
        Inc</SubjectName>
    </DocumentTitle>
    <PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">46747</PI>
    <PrimaryRIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_ResultSpec_1">CSCO.O</
      PrimaryRIC>
  </Hit>
  <Hit>
    <AssetCategoryName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_ResultSpec_1">Fixed
      Income/Fixed Rate Bond</AssetCategoryName>
    <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">INSTRUMENT.
      FIXEDINCOME.GOVCORP</BusinessEntity>
    <DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
      <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Cisco Systems Inc,
        Fixed Rate Bond, CSCO 5.250 22-Feb-2011</Value>
      <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Cisco Systems
        Inc</SubjectName>
      <SimpleType xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Fixed Rate
        Bond</SimpleType>
      <Characteristics xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">CSCO 5.250
        22-Feb-2011</Characteristics>
    </DocumentTitle>
    <PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">0x0003860206b771d</
      PI>
    <RIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_ResultSpec_1">17275RAB8=RRPS</
      RIC>
  </Hit>
  <Hit>
    <AssetCategoryName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_ResultSpec_1">Fixed
      Income/Fixed Rate Bond</AssetCategoryName>
    <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">INSTRUMENT.
      FIXEDINCOME.GOVCORP</BusinessEntity>
    <DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
      <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Cisco Systems Inc,
        Fixed Rate Bond, CSCO 5.500 22-Feb-2016</Value>
      <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Cisco Systems
        Inc</SubjectName>
      <SimpleType xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Fixed Rate
        Bond</SimpleType>
      <Characteristics xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">CSCO 5.500
        22-Feb-2016</Characteristics>
    </DocumentTitle>
    <PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">0x0003860206e50a6e</
      PI>
    <RIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_ResultSpec_1">17275RAC6=RRPS</
      RIC>
  </Hit>
  ...
</Result>
</GetSearchall_Response_1>
</Body>
</Envelope>

```



40.3.1.4 Search for Primary RIC using Company Name

The following request demonstrates how to search for primary RIC using company name (in this example Vodafone).

XML Sample Request - Search for Primary RIC using Company Name

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Search/Search.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_1/GetSearchall_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetSearchall_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_1">
      <Query>
        <Search xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/RequestDefaultFields" Include="true">
          <StringValue xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes" Value="vodafone" Negated="false" />
        </Search>
        <PrimaryRIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_QuerySpec_1" Include="true" />
      </Query>
    </GetSearchall_Request_1>
  </Body>
</Envelope>
```

XML Sample Response - Search for Primary RIC using Company Name

```
<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_1/GetSearchall_1_Reply</a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </s:Header>
  <s:Body>
    <GetSearchall_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_1">
      <ResultHeader xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">
        <FirstHit>1</FirstHit>
        <LastHit>40</LastHit>
        <Hits>40</Hits>
        <TotalHits>253</TotalHits>
        <ExecutionTime>46</ExecutionTime>
        <Duration>94</Duration>
        <SpellingSuggestion>"vodafone"</SpellingSuggestion>
      </ResultHeader>
      <NavigatorList xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes" />
      <Result>
        <Hit>
          <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">ORGANISATION</BusinessEntity>
          <DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
            <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Vodafone Group Plc</Value>
            <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Vodafone Group Plc</SubjectName>
          </DocumentTitle>
          <PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">10749</PI>
          <PrimaryRIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_ResultSpec_1">VOD.L</PrimaryRIC>
        </Hit>
        <Hit>
          <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">ORGANISATION</BusinessEntity>
```




```

        <DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
          <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Vodafone
            Egypt Telecommunications Company</Value>
          <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
            ResultSpecDatatypes">Vodafone Egypt Telecommunications Company</SubjectName>
        </DocumentTitle>
        <PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">2512496</PI>
        <PrimaryRIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_ResultSpec_1">VODE.
          CA</PrimaryRIC>
      </Hit>
      ...
      <Hit>
        <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
          ResponseDefaultFields">INSTRUMENT.FIXEDINCOME.GOVCORP</BusinessEntity>
        <DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
          <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Vodafone
            Group PLC, Fixed Rate Bond, VOD 5.125 10-Apr-2015</Value>
          <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
            ResultSpecDatatypes">Vodafone Group PLC</SubjectName>
          <SimpleType xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Fixed
            Rate Bond</SimpleType>
          <Characteristics xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">VOD
            5.125 10-Apr-2015</Characteristics>
        </DocumentTitle>
        <PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
          ResponseDefaultFields">0x00038600556940f9</PI>
      </Hit>
    </Result>
  </GetSearchall_Response_1>
</Body>
</Envelope>

```

40.3.1.5 Search by Asset Category

The following example retrieves all RIC codes for Vodafone search string within ORD asset category.

XML Sample Request - Search All Request for Items within an Asset Category

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Search/Search.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_1/
      GetSearchall_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetSearchall_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_1">
      <Filter>
        <AssetCategory xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_QuerySpec_1"
          Include="true">
          <StringValue xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes" Value="ORD"
            Negated="false" />
        </AssetCategory>
      </Filter>
      <Query>
        <Search xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/RequestDefaultFields" Include="true">
          <StringValue xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes" Value="vodafone"
            Negated="false" />
        </Search>
        <PrimaryRIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_QuerySpec_1" Include="true" />
        <RIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_QuerySpec_1" Include="true" />
      </Query>
    </GetSearchall_Request_1>
  </Body>
</Envelope>

```



XML Sample Response - Search All Response for Items within an Asset Category

```

<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_1/GetSearchall_1_Reply
    </a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetSearchall_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_1">
      <ResultHeader xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">
        <FirstHit>1</FirstHit>
        <LastHit>5</LastHit>
        <Hits>5</Hits>
        <TotalHits>5</TotalHits>
        <ExecutionTime>46</ExecutionTime>
        <Duration>109</Duration>
        <SpellingSuggestion>"vodafone"</SpellingSuggestion>
      </ResultHeader>
      <NavigatorList xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes" />
      <Result>
        <Hit>
          <AssetCategory xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_ResultSpec_1">ORD</AssetCategory>
          <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">INSTRUMENT.EQUITY</BusinessEntity>
          <DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
            <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Vodafone AG, Ordinary Share Issue</Value>
            <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Vodafone AG</SubjectName>
            <SimpleType xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Ordinary Share Issue</SimpleType>
          </DocumentTitle>
          <PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">257844</PI>
          <RIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_ResultSpec_1">VDFOF.PK</RIC>
        </Hit>
        <Hit>
          <AssetCategory xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_ResultSpec_1">ORD</AssetCategory>
          <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">INSTRUMENT.EQUITY</BusinessEntity>
          <DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
            <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Vodafone Group Plc, Ordinary Share Issue, MiFID Top Liquidity Security</Value>
            <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Vodafone Group Plc</SubjectName>
            <SimpleType xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Ordinary Share Issue</SimpleType>
            <Characteristics xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">MiFID Top Liquidity Security</Characteristics>
          </DocumentTitle>
          <PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">262356</PI>
          <RIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_ResultSpec_1">VOD.L</RIC>
        </Hit>
        ...
        <Hit>
          <AssetCategory xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_ResultSpec_1">ORD</AssetCategory>
          <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">INSTRUMENT.EQUITY</BusinessEntity>
          <DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
            <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Vodafone-Panafon Hellenic Telecom Company SA, Ordinary Share Issue</Value>
            <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Vodafone-Panafon Hellenic Telecom Company SA</SubjectName>
            <SimpleType xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Ordinary Share Issue</SimpleType>
          </DocumentTitle>
          <PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">286428</PI>
        </Hit>
      </Result>
    </GetSearchall_Response_1>
  </s:Body>
</s:Envelope>

```



```

        <RIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_ResultSpec_1">VPFHF.PK</RIC>
    </Hit>
</Result>
</GetSearchall_Response_1>

</Body>
</Envelope>

```

40.3.1.6 Retrieving RIC List From an Exchange

This request will return all RICs within London Stock Exchange by using the exchange code.

XML Sample Request - Search All Request for a Specific Exchange

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Search/Search.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_1/GetSearchall_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetSearchall_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_1">
      <Filter>
        <ExchangeCode xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_QuerySpec_1" Include="true">
          <StringValue xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes" Value="LSE"
            Negated="false" />
        </ExchangeCode>
        <RIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_QuerySpec_1" Include="true" />
      </Filter>
      <Query/>
    </GetSearchall_Request_1>
  </Body>
</Envelope>

```

XML Sample Response - Search All Response for a Specific Exchange

```

<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_1/GetSearchall_1_Reply</a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetSearchall_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_1">
      <ResultHeader xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">
        <FirstHit>1</FirstHit>
        <LastHit>40</LastHit>
        <Hits>40</Hits>
        <TotalHits>23385</TotalHits>
        <ExecutionTime>32</ExecutionTime>
        <Duration>78</Duration>
      </ResultHeader>
      <NavigatorList xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes" />
      <Result>
        <Hit>
          <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">QUOTE.
            EQUITY</BusinessEntity>
          <PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">829400</PI>
          <DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
            <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">BP Plc, Ordinary,

```



```

        London Stock Exchange</Value>
        <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">BP Plc</
        SubjectName>
        <SimpleType xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Ordinary</
        SimpleType>
        <Source xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">London Stock
        Exchange</Source>
        </DocumentTitle>
        <ExchangeCode xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_ResultSpec_1">LSE</
        ExchangeCode>
        <RIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_ResultSpec_1">BP.L</RIC>
    </Hit>
    <Hit>
        <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">QUOTE.
        EQUITY</BusinessEntity>
        <PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">21264014</PI>
        <DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
        <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Royal Dutch Shell
        Plc, Ordinary, London Stock Exchange</Value>
        <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Royal
        Dutch Shell Plc</SubjectName>
        <SimpleType xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Ordinary</
        SimpleType>
        <Source xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">London Stock
        Exchange</Source>
        </DocumentTitle>
        <ExchangeCode xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_ResultSpec_1">LSE</
        ExchangeCode>
        <RIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_ResultSpec_1">RDSA.L</RIC>
    </Hit>
    ...
    </Result>
</GetSearchall_Response_1>
</Body>
</Envelope>

```

40.3.1.7 Retrieving RIC of an Exchange

This is another example on how to retrieve a RIC for a specified exchange. In this case we are retrieving a RIC for Dow Jones.

Note: If you want the search performed on the whole phrase you have to put it in double quotes, otherwise, you will also get back results on individual words within the search criteria.

XML Sample Request - Search All Request for a Specific Index

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Search/Search.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_1/
    GetSearchall_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetSearchall_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_1">
      <Filter>
        <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/RequestDefaultFields" Include="true">
          <StringValue xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes"
            Value="INSTRUMENT.INDEX" Negated="false" />
        </BusinessEntity>
      </Filter>
      <Query>
        <Search xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/RequestDefaultFields" Include="true">
          <StringValue xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes" Value=""dow jones
            industrial average index"" Negated="false" />
        </Search>
      </Query>
    </GetSearchall_Request_1>
  </Body>
</Envelope>

```



```

</Search>
<PrimaryRIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_QuerySpec_1" Include="true" />
<RIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_QuerySpec_1" Include="true" />
</Query>
</GetSearchall_Request_1>
</Body>
</Envelope>

```

XML Sample Response - Search All Response for a Specific Index

```

<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" s:mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/
rkd/Search/Searchall_1/GetSearchall_1_Reply
    </a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetSearchall_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_1">
      <ResultHeader xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">
        <FirstHit>1</FirstHit>
        <LastHit>12</LastHit>
        <Hits>12</Hits>
        <TotalHits>12</TotalHits>
        <ExecutionTime>15</ExecutionTime>
        <Duration>453</Duration>
        <SpellingSuggestion>dow "lonkey industrial" average index</SpellingSuggestion>
      </ResultHeader>
      <NavigatorList xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes" />
      <Result>
        <Hit>
          <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
ResponseDefaultFields">INSTRUMENT.INDEX</BusinessEntity>
          <PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">271406</PI>
          <DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
            <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Dow Jones
Industrial Average Index, Index, United States</Value>
            <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Dow Jones
Industrial Average Index</SubjectName>
            <SimpleType xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Index</
SimpleType>
            <Characteristics xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">United
States</Characteristics>
          </DocumentTitle>
          <RIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_ResultSpec_1">.DJI</RIC>
        </Hit>
        <Hit>
          <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
ResponseDefaultFields">INSTRUMENT.INDEX</BusinessEntity>
          <PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">5183541</PI>
          <DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
            <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Dow Jones
Industrial Average Indicative USD Index, Index, United States</Value>
            <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Dow Jones
Industrial Average Indicative USD Index</SubjectName>
            <SimpleType xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Index</
SimpleType>
            <Characteristics xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">United
States</Characteristics>
          </DocumentTitle>
        </Hit>
        ...
      </Result>
    </GetSearchall_Response_1>
  </s:Body>
</Envelope>

```



40.3.1.8 RIC Search in a Specified Exchange

This is another example on how to retrieve a RIC from a specified exchange. Here we search for the Vodafone RIC and specify the value for the exchange as LSE. By entering more descriptive search criteria you are able to reduce retrieval time.

XML Sample Request - Search All Request for a Specific Index

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Search/Search.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_1/GetSearchall_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetSearchall_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_1">
      <Filter>
        <ExchangeCode xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_QuerySpec_1"
          Include="true">
          <StringValue xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes" Value="LSE"
            Negated="false" />
        </ExchangeCode>
      </Filter>
      <Query>
        <Search xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/RequestDefaultFields" Include="true">
          <StringValue xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes" Value="vodafone"
            Negated="false" />
        </Search>
      </Query>
    </GetSearchall_Request_1>
  </Body>
</Envelope>
```

XML Sample Response - Search All Response for a Specific Index

```
<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" s:mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_1/GetSearchall_1_Reply</a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetSearchall_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_1">
      <ResultHeader xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">
        <FirstHit>1</FirstHit>
        <LastHit>24</LastHit>
        <Hits>24</Hits>
        <TotalHits>24</TotalHits>
        <ExecutionTime>62</ExecutionTime>
        <Duration>125</Duration>
        <SpellingSuggestion>"vodafone"</SpellingSuggestion>
      </ResultHeader>
      <NavigatorList xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes" />
      <Result>
        <Hit>
          <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">QUOTE.
            EQUITY</BusinessEntity>
          <PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">1049261</PI>
          <DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
            <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Vodafone Group Plc,
              Ordinary, London Stock Exchange</Value>
            <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Vodafone
              Group Plc</SubjectName>
          </DocumentTitle>
        </Hit>
      </Result>
    </GetSearchall_Response_1>
  </s:Body>
</s:Envelope>
```



```

        <SimpleType xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Ordinary</SimpleType>
        <Source xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">London Stock Exchange</Source>
        </DocumentTitle>
        <ExchangeCode xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_ResultSpec_1">LSE</ExchangeCode>
    </Hit>
    <Hit>
        <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">QUOTE.FIXEDINCOME</BusinessEntity>
        <PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">23484205</PI>
        <DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
            <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Vodafone Group Plc, Bond Quote, London Stock Exchange</Value>
            <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Vodafone Group Plc</SubjectName>
            <SimpleType xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Bond Quote</SimpleType>
            <Source xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">London Stock Exchange</Source>
        </DocumentTitle>
        <ExchangeCode xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_ResultSpec_1">LSE</ExchangeCode>
    </Hit>
    ...
</Result>
</GetSearchall_Response_1>
</Body>
</Envelope>

```

40.3.1.9 Search for a RIC on the Nasdaq exchange using the ticker 'MSFT'

The following request demonstrates how to search for a RIC on the Nasdaq exchange using the ticker 'MSFT'.

XML Sample Request - Search for a RIC on the Nasdaq exchange using the ticker 'MSFT'

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Search/Search.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_1/GetSearchall_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetSearchall_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_1">
      <Filter>
        <ExchangeCode xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_QuerySpec_1" Include="true">
          <StringValue xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes" Value="NSQ" Negated="false" />
        </ExchangeCode>
      </Filter>
      <Query>
        <Search xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/RequestDefaultFields" Include="true">
          <StringValue xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes" Value="MSFT" Negated="false" />
        </Search>
        <RIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_QuerySpec_1" Include="true" />
      </Query>
    </GetSearchall_Request_1>
  </Body>
</Envelope>

```



XML Sample Response - Search for a RIC on the Nasdaq exchange using the ticker 'MSFT'

```

<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_1/GetSearchall_1_Reply
    </a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetSearchall_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_1">
      <ResultHeader xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">
        <FirstHit>1</FirstHit>
        <LastHit>1</LastHit>
        <Hits>1</Hits>
        <TotalHits>1</TotalHits>
        <ExecutionTime>109</ExecutionTime>
        <Duration>187</Duration>
      </ResultHeader>
      <NavigatorList xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes" />
      <Result>
        <Hit>
          <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">QUOTE.
            EQUITY</BusinessEntity>
          <PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">733337</PI>
          <DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
            <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Microsoft Corp,
              Ordinary, Consolidated Issue Listed on NASDAQ Global Select Market</Value>
          <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Microsoft
            Corp</SubjectName>
          <SimpleType xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Ordinary</
            SimpleType>
          <Source xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Consolidated
            Issue Listed on NASDAQ Global Select Market</Source>
          </DocumentTitle>
          <ExchangeCode xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_ResultSpec_1">NSQ</
            ExchangeCode>
          <RIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_ResultSpec_1">MSFT.O</RIC>
        </Hit>
      </Result>
    </Result>
  </GetSearchall_Response_1>
</Body>
</Envelope>

```

40.3.1.10 Retrieving a Breakdown of Search Results by Asset Class

To get a breakdown of your search results by asset class in Thomson Reuters Search, you have to add metadata to query and select navigation "= true". If you add the metadata to filter and select navigation "= true" it will not work.

XML Sample Request

```

<GetSearchall_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_1">
  <Query>
    <Code Include="true" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/RequestDefaultFields">
      <SymbolValue ExactMatch="false" Value="ibm" Negated="false" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes" />
    </Code>
    <BusinessEntity Include="true" Navigation="true" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/RequestDefaultFields" />
  </Query>
</GetSearchall_Request_1>

```

You can also use this feature to provide a breakdown of results by Exchange Code or by Currency for example. You can't get a breakdown by every metadata attribute, but there is a number which do support this functionality.



40.3.1.11 When to Use SearchAll and When More Specific Search Functions Like Equity Quote?

Thomson Reuters SearchAll operation takes more time but it is more convenient for a user who wants to retrieve relevant content. Specific search functions like Equity Quote or Index Instruments are faster and more targeted and they expose more metadata.

40.3.2 Organization (GetOrganisation_1)

Organization Search is a search specifically for the information on the Organization.

Note: Keep in mind that the CountryCode element takes the ISO 3166 three-letter country code (like GBR for Great Britain).

40.3.2.1 Service Endpoint and Required Headers

Service Endpoint

Thomson Reuters Organization Search Endpoint

<http://api.rkd.reuters.com/api/Search/Organisation.svc>

Required Header

Required HTTP Headers

POST /api/Search/Organisation.svc HTTP/1.1
 Content-Type: application/soap+xml
 Host: www.api.rkd.reuters.com
 Content-Length: [length]

40.3.2.2 WSDL

WSDL:

http://api.rkd.reuters.com/schemas/Search/wSDL/Organisation_1_HttpAndRKDToken.wsdl

40.3.2.3 Organization Search on Location

The following example retrieves information listed below for Organizations with headquarters in USA:

- CountryHeadquarters
- FundsCount
- LegalName
- Name
- CommonName
- DerivedCategory

Note: Since organizations do not include derived categories, an Organization search filtered by 'DerivedCategory' will always return empty results.

XML Sample Request - Organization Search in USA With Net Income Greater than One Billion

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Search/Organisation.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Organisation_1/GetOrganisation_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
```



```

</Header>
<Body>
  <GetOrganisation_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Organisation_1">
    <Filter>
      <CountryHeadquarters xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Organisation_QuerySpec_1"
        Include="true">
        <StringValue xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes" Value="USA"
          Negated="false" />
        </CountryHeadquarters>
      <FundsCount xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Organisation_QuerySpec_1"
        Include="true" />
      <LegalName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Organisation_QuerySpec_1"
        Include="true" />
    </Filter>
    <Query>
      <CommonName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/RequestDefaultFields" Include="true" />
      <DerivedCategory xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/RequestDefaultFields" Include="true"
        Navigation="true" />
    </Query>
  </GetOrganisation_Request_1>
</Body>
</Envelope>

```

XML Sample Response - Organization Search in USA With Net Income Greater than One Billion

```

<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" s:mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/
      rkd/Search/Organisation_1/GetOrganisation_1_Reply
    </a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetOrganisation_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Organisation_1">
      <ResultHeader xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">
        <FirstHit>1</FirstHit>
        <LastHit>11</LastHit>
        <Hits>11</Hits>
        <TotalHits>11</TotalHits>
        <ExecutionTime>15</ExecutionTime>
        <Duration>31</Duration>
      </ResultHeader>
      <NavigatorList xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes" />
      <Result>
        <Hit>
          <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
            ResponseDefaultFields">ORGANISATION</BusinessEntity>
          <PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">36999</PI>
          <DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
            <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Exxon Mobil Corp</
              Value>
            <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Exxon Mobil
              Corp</SubjectName>
          </DocumentTitle>
          <CommonName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Organisation_ResultSpec_1">Exxon
            Mobil Corp</CommonName>
          <CountryHeadquarters xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
            Organisation_ResultSpec_1">USA</CountryHeadquarters>
          <FundsCount xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Organisation_ResultSpec_1">0</
            FundsCount>
          <IndustryClassificationBenchmark xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
            Organisation_ResultSpec_1">0530</IndustryClassificationBenchmark>
          <LegalName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Organisation_ResultSpec_1">Exxon
            Mobil Corporation</LegalName>
          <LongTermDebt xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
            Organisation_ResultSpec_1">6220000000</LongTermDebt>
          <NetIncome xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
            Organisation_ResultSpec_1">36130000000</NetIncome>
          <NetProfit xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
            Organisation_ResultSpec_1">36130000000</NetProfit>
          <NumberOfEmployees xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/

```



```

    Organisation_ResultSpec_1">83700</NumberOfEmployees>
  </Hit>
<Hit>
  <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
ResponseDefaultFields">ORGANISATION</BusinessEntity>
  <PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">37009</PI>
  <DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
    <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">General Electric
    Co</Value>
    <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">General
    Electric Co</SubjectName>
  </DocumentTitle>
  <CommonName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Organisation_ResultSpec_1">General
  Electric Co</CommonName>
  <CountryHeadquarters xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
Organisation_ResultSpec_1">USA</CountryHeadquarters>
  <FundsCount xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Organisation_ResultSpec_1">0</
  FundsCount>
  <IndustryClassificationBenchmark xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
Organisation_ResultSpec_1">2720</IndustryClassificationBenchmark>
  <LegalName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Organisation_ResultSpec_1">General
  Electric Company</LegalName>
  <LongTermDebt xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
Organisation_ResultSpec_1">212281000000</LongTermDebt>
  <NetIncome xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
Organisation_ResultSpec_1">18275000000</NetIncome>
  <NetProfit xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
Organisation_ResultSpec_1">18275000000</NetProfit>
  <NumberOfEmployees xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
Organisation_ResultSpec_1">316000</NumberOfEmployees>
</Hit>
<Hit>
  <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
ResponseDefaultFields">ORGANISATION</BusinessEntity>
  <PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">26589</PI>
  <DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
    <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Microsoft Corp</
    Value>
    <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Microsoft
    Corp</SubjectName>
  </DocumentTitle>
  <CommonName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
Organisation_ResultSpec_1">Microsoft Corp</CommonName>
  <CountryHeadquarters xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
Organisation_ResultSpec_1">USA</CountryHeadquarters>
  <FundsCount xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Organisation_ResultSpec_1">0</
  FundsCount>
  <IndustryClassificationBenchmark xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
Organisation_ResultSpec_1">9530</IndustryClassificationBenchmark>
  <LegalName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Organisation_ResultSpec_1">Microsoft
  Corporation</LegalName>
  <LongTermDebt xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Organisation_ResultSpec_1">0</
  LongTermDebt>
  <NetIncome xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
Organisation_ResultSpec_1">12599000000</NetIncome>
  <NetProfit xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
Organisation_ResultSpec_1">12599000000</NetProfit>
  <NumberOfEmployees xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
Organisation_ResultSpec_1">71000</NumberOfEmployees>
</Hit>
  ...
</Result>
</GetOrganisation_Response_1>
</Body>
</Envelope>

```

40.3.2.4 Organization Search by Ticker

The following example searches for organization with IBM ticker:



XML Sample Request - Organization Search by Ticker

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Search/Organisation.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Organisation_1/GetOrganisation_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetOrganisation_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Organisation_1">
      <QueryHeader xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes">
        <MaxCount>10</MaxCount>
        <Pivot>0</Pivot>
        <Timeout>0</Timeout>
        <Spellcheck>Suggest</Spellcheck>
      </QueryHeader>
      <Filter>
        <Ticker xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Organisation_QuerySpec_1">
          <SymbolValue xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes" Value="IBM" />
        </Ticker>
      </Filter>
      <Query>
        <Orgid xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Organisation_QuerySpec_1" Include="true" />
        <Ticker xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Organisation_QuerySpec_1" Include="true" />
      </Query>
    </GetOrganisation_Request_1>
  </Body>
</Envelope>

```

XML Sample Response - Organization Search by Ticker

```

<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" s:mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Organisation_1/GetOrganisation_1_Reply</a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetOrganisation_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Organisation_1">
      <ResultHeader xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">
        <FirstHit>1</FirstHit>
        <LastHit>1</LastHit>
        <Hits>1</Hits>
        <TotalHits>1</TotalHits>
        <ExecutionTime>47</ExecutionTime>
        <Duration>62</Duration>
      </ResultHeader>
      <NavigatorList xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes" />
      <Result>
        <Hit>
          <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">ORGANISATION</BusinessEntity>
          <DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
            <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">International Business Machines Corp</Value>
            <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">International Business Machines Corp</SubjectName>
          </DocumentTitle>
          <Orgid xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Organisation_ResultSpec_1">18228</Orgid>
          <PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">37036</PI>
          <Ticker xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Organisation_ResultSpec_1">IBM</Ticker>
        </Hit>
      </Result>
    </GetOrganisation_Response_1>
  </s:Body>
</s:Envelope>

```



```
</Body>
</Envelope>
```

40.3.3 Commodity Quote (GetCommodityQuote_Request_1)

With Commodity Quotes search you can search on Commodity information. Although it is possible to retrieve this information through Search All, the advantage of using this operation when searching on Commodities is a faster response since it only searches within the area of interest.

40.3.3.1 Service Endpoint, and Required Headers

Service Endpoint

Thomson Reuters Commodity Quote Search Endpoint

<http://api.rkd.reuters.com/api/Search/CommodityQuote.svc>

Required Header

Required HTTP Headers

POST /api/Search/CommodityQuote.svc HTTP/1.1
 Content-Type: application/soap+xml
 Host: api.rkd.reuters.com
 Content-Length: [length]

40.3.3.2 WSDL

WSDL:

http://api.rkd.reuters.com/schemas/Search/wsd/CommodityQuote_1_HttpAndRKDToken.wsdl

40.3.3.3 Commodity Search on Coffee

This example retrieves the following commodity information on search keywords "arabica cofee" :

- Asset Category Name
- Asset Type
- Currency
- Exchange Name
- ExpiryDate
- RIC
- Primary RIC

XML Sample Request - Commodity Search

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Search/CommodityQuote.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/CommodityQuote_1/GetCommodityQuote_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
```



```

</Header>
<Body>
  <GetCommodityQuote_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/CommodityQuote_1">
    <Query>
      <Search xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/RequestDefaultFields " Include="true">
        <StringValue xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes" Value="arabica
          coffee" Negated="false" />
      </Search>
      <Name xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/RequestDefaultFields " Include="true" />
      <AssetCategoryName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/CommodityQuote_QuerySpec_1"
        Include="true" />
      <AssetType xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/CommodityQuote_QuerySpec_1"
        Include="true" />
      <Currency xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/CommodityQuote_QuerySpec_1" Include="true" /
      >
      <ExchangeName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/CommodityQuote_QuerySpec_1"
        Include="true" />
      <ExpiryDate xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/CommodityQuote_QuerySpec_1" Include="true"
        />
      <PrimaryRIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/CommodityQuote_QuerySpec_1"
        Include="true" />
      <RIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/CommodityQuote_QuerySpec_1" Include="true" />
    </Query>
  </GetCommodityQuote_Request_1>
</Body>
</Envelope>

```

XML Sample Response - Commodity Search

```

<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/rkd/
      Search/CommodityQuote_1/GetCommodityQuote_1_Reply
    </a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetCommodityQuote_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/CommodityQuote_1">
      <ResultHeader xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">
        <FirstHit>1</FirstHit>
        <LastHit>40</LastHit>
        <Hits>40</Hits>
        <TotalHits>82</TotalHits>
        <ExecutionTime>187</ExecutionTime>
        <Duration>344</Duration>
        <SpellingSuggestion>arabia coffee</SpellingSuggestion>
      </ResultHeader>
      <NavigatorList xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes" />
      <Result>
        <Hit>
          <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">QUOTE.
            COMMODITY</BusinessEntity>
          <PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">16254</PI>
          <DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
            <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">NEW YORK BOARD OF
              TRADE (CSC) COFFEE ARABICA FUTURES CHAIN, Commodity Future, Board of Trade of the City of New York, Inc. (Coffee,
              Sugar and Cocoa)</Value>
            <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">NEW YORK
              BOARD OF TRADE (CSC) COFFEE ARABICA FUTURES CHAIN</SubjectName>
            <SimpleType xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Commodity
              Future</SimpleType>
            <Source xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Board of Trade of the
              City of New York, Inc. (Coffee,Sugar and Cocoa)</Source>
          </DocumentTitle>
          <AssetCategoryName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/CommodityQuote_ResultSpec_1"
            ">Commodity/Commodity Future</AssetCategoryName>
          <AssetType xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/CommodityQuote_ResultSpec_1"
            ">DERIVATIVE</AssetType>
          <Currency xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/CommodityQuote_ResultSpec_1">US</
            Currency>
          <ExchangeName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/CommodityQuote_ResultSpec_1"
            ">Board of Trade of the City of New York, Inc. (Coffee,Sugar and Cocoa)</ExchangeName>
        </Hit>
      </Result>
    </GetCommodityQuote_Response_1>
  </s:Body>
</s:Envelope>

```



```

    <RIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/CommodityQuote_ResultSpec_1">0#KC:</RIC>
  </Hit>
  ...
  <Hit>
    <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">QUOTE.
    COMMODITY</BusinessEntity>
    <PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">255696</PI>
    <DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
      <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">CAMEROON ARABICA
      LAVE A COFFEE EX DOCK LE HAVRE, Commodity Cash, Cash Commodity Rates EMEA</Value>
      <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">CAMEROON
      ARABICA LAVE A COFFEE EX DOCK LE HAVRE</SubjectName>
      <SimpleType xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Commodity
      Cash</SimpleType>
      <Source xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Cash Commodity
      Rates EMEA</Source>
    </DocumentTitle>
    <AssetCategoryName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
    CommodityQuote_ResultSpec_1">Commodity/Commodity Cash</AssetCategoryName>
    <AssetType xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/CommodityQuote_ResultSpec_1
    ">COMMODITY</AssetType>
    <Currency xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/CommodityQuote_ResultSpec_1">EUR</
    Currency>
    <ExchangeName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/CommodityQuote_ResultSpec_1">Cash
    Commodity Rates EMEA</ExchangeName>
    <RIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/CommodityQuote_ResultSpec_1">CFCM-LALEH-
    XDK</RIC>
  </Hit>
</Result>
</GetCommodityQuote_Response_1>
</Body>
</Envelope>

```

40.3.3.4 Commodity Search with a Filter

This example requests commodity information with a search on keyword "egyptian" and navigation set to true for Asset Category name to get the breakdown of records and Asset Categories they belong to. The Filter section contains further search criteria on AssetCategory, where we filter on specific categories: CFD,CSO,CIX, CMO, CCS, CFX, CMF, CSP, CST, CMW.

The response will contain the following information:

- AssetCategory NavigatorList
- PI
- AssetCategoryName
- RIC

XML Sample Request - Commodity Search Using a Filter

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Search/CommodityQuote.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
    CommodityQuote_1/GetCommodityQuote_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetCommodityQuote_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/CommodityQuote_1">
      <Filter>
        <AssetCategory xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/CommodityQuote_QuerySpec_1"
        Include="true">
          <StringValue xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes" Value="CFD"
          Negated="false" />
          <StringValue xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes" Value="CSO"
          Negated="false" />
          <StringValue xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes" Value="CIX"

```




```

Negated="false" />
<StringValue xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes" Value="CMO"
Negated="false" />
<StringValue xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes" Value="CCS"
Negated="false" />
<StringValue xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes" Value="CFX"
Negated="false" />
<StringValue xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes" Value="CMF"
Negated="false" />
<StringValue xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes" Value="CSP"
Negated="false" />
<StringValue xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes" Value="CST"
Negated="false" />
<StringValue xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes" Value="CMW"
Negated="false" />
</AssetCategory>
</Filter>
<Query>
  <Search xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/RequestDefaultFields" Include="true">
    <StringValue xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes" Value="egyptian"
      Negated="false" />
  </Search>
  <PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/RequestDefaultFields" Include="true" />
  <AssetCategoryName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/CommodityQuote_QuerySpec_1"
    Include="true" Navigation="true" />
  <RIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/CommodityQuote_QuerySpec_1" Include="true" />
</Query>
</GetCommodityQuote_Request_1>
</Body>
</Envelope>

```

XML Sample Response - Commodity Search Using a Filter

```

<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/rkd/
      Search/CommodityQuote_1/GetCommodityQuote_1_Reply
    </a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetCommodityQuote_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/CommodityQuote_1">
      <ResultHeader xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">
        <FirstHit>1</FirstHit>
        <LastHit>40</LastHit>
        <Hits>40</Hits>
        <TotalHits>72</TotalHits>
        <ExecutionTime>219</ExecutionTime>
        <Duration>312</Duration>
      </ResultHeader>
      <NavigatorList xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">
        <StringNavigator FieldName="AssetCategoryName" HitCount="72" Entropy="0" Ratio="1" Score="0" SampleCount="72">
          <Modifier Count="72" Value="Commodity/Commodity Cash" />
        </StringNavigator>
      </NavigatorList>
      <Result>
        <Hit>
          <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">QUOTE.
            COMMODITY</BusinessEntity>
          <PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">6167144</PI>
          <DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
            <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">EGYPTIAN G89
              COTTON EGYPT FOB ALEXANDRIA, Commodity Cash, Cash Commodity Rates EMEA</Value>
            <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">EGYPTIAN
              G89 COTTON EGYPT FOB ALEXANDRIA</SubjectName>
            <SimpleType xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Commodity
              Cash</SimpleType>
            <Source xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Cash Commodity
              Rates EMEA</Source>
          </DocumentTitle>
          <AssetCategory xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
            CommodityQuote_ResultSpec_1">CCS</AssetCategory>

```




```

    <AssetCategoryName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/CommodityQuote_ResultSpec_1"
    ">Commodity/Commodity Cash</AssetCategoryName>
    <RIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/CommodityQuote_ResultSpec_1">COT-EG-
    G89</RIC>
    </Hit>
    ...
    <Hit>
    <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">QUOTE.
    COMMODITY</BusinessEntity>
    <PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">38350415</PI>
    <DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
    <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">USDA;Hard Red
    Winter Wheat Exports Egypt - Weekly Net Sales, Commodity Cash</Value>
    <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">USDA;Hard
    Red Winter Wheat Exports Egypt - Weekly Net Sales</SubjectName>
    <SimpleType xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Commodity
    Cash</SimpleType>
    </DocumentTitle>
    <AssetCategory xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/CommodityQuote_ResultSpec_1"
    ">CCS</AssetCategory>
    <AssetCategoryName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/CommodityQuote_ResultSpec_1"
    ">Commodity/Commodity Cash</AssetCategoryName>
    <RIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/CommodityQuote_ResultSpec_1">HRW-WNS-
    EG</RIC>
    </Hit>
    </Result>
  </GetCommodityQuote_Response_1>
</Body>
</Envelope>

```

40.3.4 Derivative Instruments (GetDerivativeInst_1)

This operation searches and retrieves information related to Derivative Instruments.

40.3.4.1 Service Endpoint and Required Headers

Service Endpoint

Thomson Reuters Derivative Instrument Search Endpoint

<http://api.rkd.reuters.com/api/Search/DerivativeInst.svc>

Required Header

Required HTTP Headers

POST /api/Search/DerivativeInst.svc HTTP/1.1
 Content-Type: application/soap+xml
 Host: api.rkd.reuters.com
 Content-Length: [length]

40.3.4.2 WSDL

WSDL:

http://api.rkd.reuters.com/schemas/Search/wSDL/DerivativeInst_1_HttpAndRKDToken.wsdl

40.3.4.3 Retrieving Warrants for an Underlying Issuer

The following request retrieves records from Warrant Category for an Underlying issuer with id of 37036. The following fields are set to be returned in the response:

- IssuerCommonName
- UnderlyingQuoteRIC



- RIC
- UnderlyingIssuerPI

XML Sample Request - Derivative Instrument Search on Warrants for an Underlying Issuer

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Search/DerivativeInst.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/DerivativeInst_1/GetDerivativeInst_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetDerivativeInst_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/DerivativeInst_1">
      <Filter>
        <DerivedCategory xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/RequestDefaultFields"
          Include="true">
          <StringValue xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes"
            Value="WARRANT" Negated="false" />
        </DerivedCategory>
        <UnderlyingIssuerPI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/DerivativeInst_QuerySpec_1"
          Include="true">
          <StringValue xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes" Value="37036"
            Negated="false" />
        </UnderlyingIssuerPI>
      </Filter>
      <Query>
        <IssuerCommonName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/DerivativeInst_QuerySpec_1"
          Include="true" />
        <RIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/DerivativeInst_QuerySpec_1" Include="true" />
        <UnderlyingQuoteRIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/DerivativeInst_QuerySpec_1"
          Include="true" />
      </Query>
    </GetDerivativeInst_Request_1>
  </Body>
</Envelope>
```

XML Sample Response - Derivative Instrument Search on Warrants for an Underlying Issuer

```
<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/DerivativeInst_1/GetDerivativeInst_1_Reply</a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetDerivativeInst_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/DerivativeInst_1">
      <ResultHeader xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">
        <FirstHit>1</FirstHit>
        <LastHit>40</LastHit>
        <Hits>40</Hits>
        <TotalHits>147</TotalHits>
        <ExecutionTime>93</ExecutionTime>
        <Duration>125</Duration>
      </ResultHeader>
      <NavigatorList xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes" />
      <Result>
        <Hit>
          <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">INSTRUMENT.
            EQUITY</BusinessEntity>
          <PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">24294068</PI>
          <DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
            <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">IBM Ord Shs, Warrant,
              HSBC Trinkaus & Burkhardt AG PUT 70.000 11-Jan-2008</Value>
          </Value>
        </Hit>
      </Result>
    </GetDerivativeInst_Response_1>
  </s:Body>
</s:Envelope>
```



```

<SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">IBM Ord Shs</SubjectName>
<SimpleType xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Warrant</SimpleType>
<Characteristics xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">HSBC Trinkaus & Burkhardt AG PUT 70.000 11-Jan-2008</Characteristics>
</DocumentTitle>
<IssuerCommonName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/DerivativeInst_ResultSpec_1">HSBC Trinkaus & Burkhardt AG</IssuerCommonName>
<UnderlyingIssuerPI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/DerivativeInst_ResultSpec_1">37036</UnderlyingIssuerPI>
<UnderlyingQuoteRIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/DerivativeInst_ResultSpec_1">IBM.N</UnderlyingQuoteRIC>
</Hit>
...
<Hit>
<BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">INSTRUMENT.EQUITY</BusinessEntity>
<PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">24294069</PI>
<DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
<Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">IBM Ord Shs, Warrant, HSBC Trinkaus & Burkhardt AG PUT 70.000 15-Dec-2008</Value>
<SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">IBM Ord Shs</SubjectName>
<SimpleType xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Warrant</SimpleType>
<Characteristics xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">HSBC Trinkaus & Burkhardt AG PUT 70.000 15-Dec-2008</Characteristics>
</DocumentTitle>
<IssuerCommonName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/DerivativeInst_ResultSpec_1">HSBC Trinkaus & Burkhardt AG</IssuerCommonName>
<UnderlyingIssuerPI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/DerivativeInst_ResultSpec_1">37036</UnderlyingIssuerPI>
<UnderlyingQuoteRIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/DerivativeInst_ResultSpec_1">IBM.N</UnderlyingQuoteRIC>
</Hit>
</Result>
</GetDerivativeInst_Response_1>
</Body>
</Envelope>

```

40.3.5 Derivative Quote (GetDerivativeQuote_1)

The DerivativeQuote operation gives the ability to search on all the derivative quote information in the Thomson Reuters index.

40.3.5.1 Service Endpoint and Required Headers

Service Endpoint

Thomson Reuters Derivative Quote Search Endpoint

<http://api.rkd.reuters.com/api/Search/DerivativeQuote.svc>

Required Header

Required HTTP Headers

POST /api/Search/DerivativeQuote.svc HTTP/1.1
 Content-Type: application/soap+xml
 Host: api.rkd.reuters.com
 Content-Length: [length]

40.3.5.2 WSDL

WSDL:



http://api.rkd.reuters.com/schemas/Search/wSDL/DerivativeQuote_1_HttpAndRKDToken.wsdl

40.3.5.3 Search for Index Membership

This example demonstrates how to use Derivative Quote operation to retrieve records for a specified underlying issuer. The request also states to return the following information:

- CommonName
- ExchangeName
- RIC
- UnderlyingIssuerPI

XML Sample Request - Derivative Quote Search with Underlying Issuer

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Search/DerivativeQuote.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
DerivativeQuote_1/GetDerivativeQuote_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetDerivativeQuote_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/DerivativeQuote_1">
      <Filter>
        <CommonName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/RequestDefaultFields" Include="true" /
        >
        <ExchangeName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/DerivativeQuote_QuerySpec_1"
Include="true" />
        <RIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/DerivativeQuote_QuerySpec_1" Include="true" />
        <UnderlyingIssuerPI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/DerivativeQuote_QuerySpec_1"
Include="true">
          <StringValue xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes" Value="37036"
Negated="false" />
        </UnderlyingIssuerPI>
      </Filter>
      <Query>
        <Name xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/RequestDefaultFields" Include="true" />
      </Query>
    </GetDerivativeQuote_Request_1>
  </Body>
</Envelope>
```

XML Sample Response - Derivative Quote Search with Underlying Issuer

```
<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/rkd/
Search/DerivativeQuote_1/GetDerivativeQuote_1_Reply
    </a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetDerivativeQuote_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/DerivativeQuote_1">
      <ResultHeader xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">
        <FirstHit>1</FirstHit>
        <LastHit>40</LastHit>
        <Hits>40</Hits>
        <TotalHits>1254</TotalHits>
        <ExecutionTime>218</ExecutionTime>
        <Duration>266</Duration>
      </ResultHeader>
    </GetDerivativeQuote_Response_1>
  </s:Body>
</s:Envelope>
```



```

<NavigatorList xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes" />
<Result>
  <Hit>
    <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">QUOTE.
    EQUITY</BusinessEntity>
    <PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">19136336</PI>
    <DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
      <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">LIFFE UK IBM
      Corporation PD Equity Future Chain, Future, USD, The London International Financial Futures and Options Exchange</
      Value>
      <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">LIFFE UK
      IBM Corporation PD Equity Future Chain</SubjectName>
      <SimpleType xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Future</
      SimpleType>
      <Characteristics xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">USD</
      Characteristics>
      <Source xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">The London
      International Financial Futures and Options Exchange</Source>
    </DocumentTitle>
    <ExchangeName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/DerivativeQuote_ResultSpec_1">The
    London International Financial Futures and Options Exchange</ExchangeName>
    <RIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/DerivativeQuote_ResultSpec_1">0#IBMXlf:</RIC>
    <UnderlyingIssuerPI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/DerivativeQuote_ResultSpec_1
    ">37036</UnderlyingIssuerPI>
  </Hit>
  ...
  <Hit>
    <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">QUOTE.
    EQUITY</BusinessEntity>
    <PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">34495239</PI>
    <DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
      <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">IBM JUN8 84 P,
      Option, PUT 84.000 EUR 20-Jun-2008, Eurex</Value>
      <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">IBM JUN8
      84 P</SubjectName>
      <SimpleType xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Option</
      SimpleType>
      <Characteristics xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">PUT
      84.000 EUR 20-Jun-2008</Characteristics>
      <Source xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Eurex</Source>
    </DocumentTitle>
    <ExchangeName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
    DerivativeQuote_ResultSpec_1">Eurex</ExchangeName>
    <RIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/DerivativeQuote_ResultSpec_1">IBM840R8.EX</
    RIC>
    <UnderlyingIssuerPI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/DerivativeQuote_ResultSpec_1
    ">37036</UnderlyingIssuerPI>
  </Hit>
</Result>
</GetDerivativeQuote_Response_1>

</Body>
</Envelope>

```

40.3.6 Equity Quote (GetEquityQuote_1)

This operation searches all Equity Quotes.

40.3.6.1 Service Endpoint and Required Headers

Service Endpoint

Thomson Reuters Equity Quote Search Endpoint

<http://api.rkd.reuters.com/api/Search/EquityQuote.svc>

Required Header

Required HTTP Headers



```
POST /api/Search/EquityQuote.svc HTTP/1.1
Content-Type: application/soap+xml
Host: api.rkd.reuters.com
Content-Length: [length]
```

40.3.6.2 WSDL

WSDL:

```
http://api.rkd.reuters.com/schemas/Search/wsd/EquityQuote_1_HttpAndRKDTOKEN.wsdl
```

40.3.6.3 Retrieve All RICs for a Particular Index

This example retrieves RICs from Equity Quote for Dow Jones:

XML Sample Request - Search Equity Quote for a Specific Index

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Search/EquityQuote.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_1/GetEquityQuote_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetEquityQuote_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_1">
      <Filter/>
      <Query>
        <RIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_QuerySpec_1" Include="true" />
      </Query>
    </GetEquityQuote_Request_1>
  </Body>
</Envelope>
```

XML Sample Response - Search Equity Quote for a Specific Index

```
<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_1/GetEquityQuote_1_Reply</a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetEquityQuote_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/GetEquityQuote_1_Reply">
      <ResultHeader xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">
        <FirstHit>1</FirstHit>
        <LastHit>30</LastHit>
        <Hits>30</Hits>
        <TotalHits>30</TotalHits>
        <ExecutionTime>31</ExecutionTime>
        <Duration>109</Duration>
      </ResultHeader>
      <NavigatorList xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes" />
      <Result>
        <Hit>
          <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">QUOTE.EQUITY</BusinessEntity>
          <PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">7759230</PI>
          <DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
            <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Microsoft Corp,
```



```

        Ordinary, NASDAQ Stock Exchange Global Select Market</Value>
        <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Microsoft
        Corp</SubjectName>
        <SimpleType xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Ordinary</
        SimpleType>
        <Source xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">NASDAQ Stock
        Exchange Global Select Market</Source>
    </DocumentTitle>
    <IndexMembership xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
    EquityQuote_ResultSpec_1">271404/271406/271449/271455/276367/279529/280520/280586/280713/296670/315319/32139
    1/325547/327496/329820/334798/334799/346454/346842/347349/356474/359012/359337/359341/367178/370142/384370/
    389183/394162/394844/400161/512390/522354/529873/5286056/5286057/5286058/5286059/5847432/6003336/6003338/61
    05340/6105358/6105377/6105470/11188749/18780593/18895463/18895608/18895731/18896327/18897045/20727980</
    IndexMembership>
    <RIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_ResultSpec_1">MSFT.OQ</
    RIC>
</Hit>
<Hit>
    <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">QUOTE.
    EQUITY</BusinessEntity>
    <PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">1090154</PI>
    <DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
    <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">General Electric Co,
    Ordinary, New York Stock Exchange</Value>
    <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">General
    Electric Co</SubjectName>
    <SimpleType xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Ordinary</
    SimpleType>
    <Source xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">New York Stock
    Exchange</Source>
    </DocumentTitle>
    <IndexMembership xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
    EquityQuote_ResultSpec_1">271404/271406/271449/271455/279529/280586/280713/296670/325547/334798/334799/34093
    2/346454/346799/347349/356474/373345/384179/384370/394162/400161/529873/5286064/5286065/5286066/5286067/584
    7432/6081820/6105322/6105356/6105373/6105438/6245458/11188749/18780579/18895463/18895467/18895614/18896096
    /18896270</IndexMembership>
    <RIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_ResultSpec_1">GE.N</RIC>
</Hit>
...
</Result>
</GetEquityQuote_Response_1>
</Body>
</Envelope>

```

40.3.6.4 Search for all Equity RICs from the London Stock Exchange

This example searches for all Equity RICs from the London Stock Exchange.

XML Sample Request - Search for all Equity RICs from the London Stock Exchange

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Search/EquityQuote.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_1/
    GetEquityQuote_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetEquityQuote_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_1">
      <Query>
        <ExchangeCode xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_QuerySpec_1" Include="true"
        ">
          <StringValue xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes" Value="LSE"
          Negated="false" />

```




```

    </ExchangeCode>
    <RIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_QuerySpec_1" Include="true" />
  </Query>
</GetEquityQuote_Request_1>

</Body>
</Envelope>

```

XML Sample Response - Search for all Equity RICs from the London Stock Exchange

```

<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_1/GetEquityQuote_1_Reply</a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetEquityQuote_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_1">
      <ResultHeader xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">
        <FirstHit>1</FirstHit>
        <LastHit>40</LastHit>
        <Hits>40</Hits>
        <TotalHits>4840</TotalHits>
        <ExecutionTime>62</ExecutionTime>
        <Duration>203</Duration>
      </ResultHeader>
      <NavigatorList xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes" />
      <Result>
        <Hit>
          <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">QUOTE.EQUITY</BusinessEntity>
          <DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
            <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Royal Dutch Shell Plc, Ordinary, MiFID Top Liquidity Security, London Stock Exchange</Value>
            <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Royal Dutch Shell Plc</SubjectName>
            <SimpleType xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Ordinary</SimpleType>
            <Characteristics xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">MiFID Top Liquidity Security</Characteristics>
            <Source xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">London Stock Exchange</Source>
          </DocumentTitle>
          <ExchangeCode xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_ResultSpec_1">LSE</ExchangeCode>
          <PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">21264014</PI>
          <RIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_ResultSpec_1">RDSa.L</RIC>
        </Hit>
        ....
        <Hit>
          <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">QUOTE.EQUITY</BusinessEntity>
          <DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
            <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">J Sainsbury PLC, Ordinary, MiFID Top Liquidity Security, London Stock Exchange</Value>
            <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">J Sainsbury PLC</SubjectName>
            <SimpleType xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Ordinary</SimpleType>
            <Characteristics xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">MiFID Top Liquidity Security</Characteristics>
            <Source xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">London Stock Exchange</Source>
          </DocumentTitle>
          <ExchangeCode xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_ResultSpec_1">LSE</ExchangeCode>
          <PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">1049304</PI>
          <RIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_ResultSpec_1">SBRY.L</RIC>
        </Hit>
      </Result>
    </GetEquityQuote_Response_1>
  </s:Body>

```




```
</Envelope>
```

40.3.6.5 Search for IBM trading on a number of Named Exchanges (New York, Hamburg and Euro TLX)

This example shows how to search for IBM trading on a number of Named Exchanges (New York, Hamburg and Euro TLX).

XML Sample Request - Search for IBM trading on a number of Named Exchanges (New York, Hamburg and Euro TLX)

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Search/EquityQuote.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_1/GetEquityQuote_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetEquityQuote_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_1">
      <Filter>
        <ExchangeCode xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_QuerySpec_1" Include="true">
          <StringValue xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes" Value="NYS"
            Negated="false" />
          <StringValue xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes" Value="HAM"
            Negated="false" />
          <StringValue xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes" Value="ETX"
            Negated="false" />
        </ExchangeCode>
      </Filter>
      <Query>
        <Search xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/RequestDefaultFields" Include="true">
          <StringValue xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes" Value="IBM"
            Negated="false" />
        </Search>
      </Query>
    </GetEquityQuote_Request_1>
  </Body>
</Envelope>
```

XML Sample Response - Search for IBM trading on a number of Named Exchanges (New York, Hamburg and Euro TLX)

```
<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_1/GetEquityQuote_1_Reply</a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetEquityQuote_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_1">
      <ResultHeader xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">
        <FirstHit>1</FirstHit>
        <LastHit>3</LastHit>
        <Hits>3</Hits>
        <TotalHits>3</TotalHits>
        <ExecutionTime>0</ExecutionTime>
        <Duration>47</Duration>
      </ResultHeader>
      <NavigatorList xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes" />
      <Result>
        <Hit>
```



```

<BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">QUOTE.
EQUITY</BusinessEntity>
<DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
  <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">
    International Business Machines Corp, Ordinary, New York Stock Exchange</Value>
  <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
ResultSpecDatatypes">International Business Machines Corp</SubjectName>
  <SimpleType xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
ResultSpecDatatypes">Ordinary</SimpleType>
  <Source xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">New York
Stock Exchange</Source>
</DocumentTitle>
<ExchangeCode xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
EquityQuote_ResultSpec_1">NYS</ExchangeCode>
<PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">1090370</PI>
</Hit>
<Hit>
  <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">QUOTE.
EQUITY</BusinessEntity>
  <DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
    <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">
      International Business Machines Corp, Ordinary, Hamburg Stock Exchange</Value>
    <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
ResultSpecDatatypes">International Business Machines Corp</SubjectName>
    <SimpleType xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
ResultSpecDatatypes">Ordinary</SimpleType>
    <Source xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Hamburg
Stock Exchange</Source>
  </DocumentTitle>
  <ExchangeCode xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
EquityQuote_ResultSpec_1">HAM</ExchangeCode>
  <PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">986737</PI>
</Hit>
<Hit>
  <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">QUOTE.
EQUITY</BusinessEntity>
  <DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
    <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">
      International Business Machines Corp, Ordinary, Euro TLX</Value>
    <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
ResultSpecDatatypes">International Business Machines Corp</SubjectName>
    <SimpleType xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
ResultSpecDatatypes">Ordinary</SimpleType>
    <Source xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Euro TLX</
Source>
  </DocumentTitle>
  <ExchangeCode xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
EquityQuote_ResultSpec_1">ETX</ExchangeCode>
  <PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">26924068</PI>
</Hit>
</Result>
</GetEquityQuote_Response_1>
</Body>
</Envelope>

```

40.3.6.6 Search for Quote Detail by Issuer Ticker

This example shows how to search for quote detail by Issuer Ticker ("IBM"). The response will also return the following values:

- EstimateData
- IsPrimaryRIC
- IssuerTicker
- IssuerMXID

XML Sample Request - Search for Quote Detail by Issuer Ticker

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Search/EquityQuote.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
  </Header>
  <Body>
    <SearchForQuoteDetailByIssuerTicker xmlns="http://www.w3.org/2005/08/addressing">IBM</SearchForQuoteDetailByIssuerTicker>
  </Body>
</Envelope>

```



```

<Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_1/
GetEquityQuote_1</Action>
<Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
  <ApplicationID>[AppID]</ApplicationID>
  <Token>[Impersonation Token]</Token>
</Authorization>
</Header>
<Body>
  <GetEquityQuote_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_1">
    <QueryHeader xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes">
      <MaxCount>10</MaxCount>
      <Pivot>0</Pivot>
      <Timeout>0</Timeout>
      <Spellcheck>Suggest</Spellcheck>
    </QueryHeader>
    <Filter>
      <IsPrimaryRIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_QuerySpec_1">
        <BooleanValue xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes" Value="true" />
      </IsPrimaryRIC>
      <IssuerTicker xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_QuerySpec_1">
        <SymbolValue xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes" Value="IBM" />
      </IssuerTicker>
    </Filter>
    <Query>
      <EstimateData xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_QuerySpec_1" Include="true" />
      <EstimateList xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_QuerySpec_1" Include="true" />
      <IsPrimaryRIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_QuerySpec_1" Include="true" />
      <IssuerTicker xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_QuerySpec_1" Include="true" />
      <IssuerMXID xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_QuerySpec_1" Include="true" />
    </Query>
  </GetEquityQuote_Request_1>
</Body>
</Envelope>

```

XML Sample Response - Search for Quote Detail by Issuer Ticker

```

<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1"> http://www.reuters.com/ns/2006/05/01/webservices/rkd/
Search/EquityQuote_1/GetEquityQuote_1_Reply
    </a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetEquityQuote_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_1">
      <ResultHeader xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">
        <FirstHit>1</FirstHit>
        <LastHit>1</LastHit>
        <Hits>1</Hits>
        <TotalHits>1</TotalHits>
        <ExecutionTime>78</ExecutionTime>
        <Duration>63</Duration>
      </ResultHeader>
      <NavigatorList xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes" />
      <Result>
        <Hit>
          <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">QUOTE.
EQUITY</BusinessEntity>
          <DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
            <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">International
Business Machines Corp, Ordinary, New York Consolidated</Value>
            <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">International
Business Machines Corp</SubjectName>
            <SimpleType xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Ordinary</
SimpleType>
            <Source xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">New York
Consolidated</Source>
          </DocumentTitle>
          <IsPrimaryRIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_ResultSpec_1">true</

```



```

    IsPrimaryRIC>
    <IssuerMXID xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
EquityQuote_ResultSpec_1">100085757</IssuerMXID>
    <IssuerTicker xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_ResultSpec_1">IBM</
IssuerTicker>
    <PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">1097326</PI>
  </Hit>
</Result>
</GetEquityQuote_Response_1>
</Body>
</Envelope>

```

40.3.6.7 Search for Quote Detail by Issuer MXID

This example shows how to search for quote detail by Issuer MXID ("100085757").

XML Sample Request - Search for Quote Detail by Issuer MXID

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Search/EquityQuote.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_1/
GetEquityQuote_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetEquityQuote_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_1">
      <QueryHeader xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes">
        <MaxCount>10</MaxCount>
        <Pivot>0</Pivot>
        <Timeout>0</Timeout>
        <Spellcheck>Suggest</Spellcheck>
      </QueryHeader>
      <Filter>
        <IsPrimaryRIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_QuerySpec_1">
          <BooleanValue xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes" Value="true" />
        </IsPrimaryRIC>
        <IssuerMXID xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_QuerySpec_1">
          <SymbolValue xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes" ExactMatch="false"
Value="100085757" Negated="false" />
        </IssuerMXID>
      </Filter>
      <Query>
        <EstimateData xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_QuerySpec_1" Include="true" />
        <IsPrimaryRIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_QuerySpec_1" Include="true" />
        <IssuerMXID xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_QuerySpec_1" Include="true" />
        <IssuerTicker xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_QuerySpec_1" Include="true" />
      </Query>
    </GetEquityQuote_Request_1>
  </Body>
</Envelope>

```

XML Sample Response - Search for Quote Detail by Issuer MXID

```

<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/rkd/
Search/EquityQuote_1/GetEquityQuote_1_Reply
    </a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetEquityQuote_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_1">
      <Hit>
        <IsPrimaryRIC>true</IsPrimaryRIC>
        <IssuerMXID>100085757</IssuerMXID>
        <IssuerTicker>IBM</IssuerTicker>
        <PI>1097326</PI>
      </Hit>
    </GetEquityQuote_Response_1>
  </s:Body>
</s:Envelope>

```



```

</s:Header>
<s:Body>
  <GetEquityQuote_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_1">
    <ResultHeader xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">
      <FirstHit>1</FirstHit>
      <LastHit>1</LastHit>
      <Hits>1</Hits>
      <TotalHits>1</TotalHits>
      <ExecutionTime>62</ExecutionTime>
      <Duration>78</Duration>
    </ResultHeader>
    <NavigatorList xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes" />
    <Result>
      <Hit>
        <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">QUOTE.
          EQUITY</BusinessEntity>
        <DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
          <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">International
            Business Machines Corp, Ordinary, New York Consolidated</Value>
          <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">International
            Business Machines Corp</SubjectName>
          <SimpleType xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Ordinary</
            SimpleType>
          <Source xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">New York
            Consolidated</Source>
        </DocumentTitle>
        <IsPrimaryRIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_ResultSpec_1">true</
          IsPrimaryRIC>
        <IssuerMXID xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
          EquityQuote_ResultSpec_1">100085757</IssuerMXID>
        <IssuerTicker xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_ResultSpec_1">IBM</
          IssuerTicker>
        <PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">1097326</PI>
      </Hit>
    </Result>
  </GetEquityQuote_Response_1>
</Body>
</Envelope>

```

40.3.6.8 Search for Quote Detail by Estimate ID

This example shows how to search for quote detail by Estimate ID ("CA_A2651_1").

XML Sample Request - Search for Quote Detail by Estimate ID

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Search/EquityQuote.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_1/
      GetEquityQuote_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetEquityQuote_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_1">
      <QueryHeader xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes">
        <MaxCount>5</MaxCount>
        <Pivot>0</Pivot>
        <Timeout>0</Timeout>
        <Spellcheck>On</Spellcheck>
      </QueryHeader>
      <Filter>
        <EstimateData xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_QuerySpec_1" Include="true">
          <StringValue xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes"
            Value="CA_A2651_1" Negated="false" />
        </EstimateData>
        <IsPrimaryRIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_QuerySpec_1" Include="true" /

```



```

    >
    <IssuerMXID xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_QuerySpec_1" Include="true" />
  </Filter>
  <Query />
</GetEquityQuote_Request_1>

</Body>
</Envelope>

```

XML Sample Response - Search for Quote Detail by Estimate ID

```

<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_1/GetEquityQuote_1_Reply
  </a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetEquityQuote_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_1">
      <ResultHeader xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">
        <FirstHit>1</FirstHit>
        <LastHit>5</LastHit>
        <Hits>5</Hits>
        <TotalHits>17</TotalHits>
        <ExecutionTime>94</ExecutionTime>
        <Duration>109</Duration>
      </ResultHeader>
      <NavigatorList xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes" />
      <Result>
        <Hit>
          <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">QUOTE.EQUITY</BusinessEntity>
          <DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
            <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Thomson Reuters Corporation, Ordinary, The Toronto Stock Exchange</Value>
            <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Thomson Reuters Corporation</SubjectName>
            <SimpleType xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Ordinary</SimpleType>
            <Source xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">The Toronto Stock Exchange</Source>
          </DocumentTitle>
          <EstimateData xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_ResultSpec_1">
            <EstimateID xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">CA_A2651_1</EstimateID>
            <Repno xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">A2651</Repno>
            <RepnoName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">"Thomson Reuters Corporation"</RepnoName>
            <PricingRIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">TRI.TO</PricingRIC>
            <EstimateActive xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">True</EstimateActive>
            <EstimateCountry xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">CAN</EstimateCountry>
            <EstimateCurrency xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">USD</EstimateCurrency>
            <EstimateExchange xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">TSE</EstimateExchange>
            <EstimateIssueID xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">1</EstimateIssueID>
          </EstimateData>
          ...
          <EstimateData xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_ResultSpec_1">
            <EstimateID xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">US_A489F_1</EstimateID>
            <Repno xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">A489F</Repno>
            <RepnoName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">"Thomson Reuters Corporation (USA)"</RepnoName>
            <PricingRIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">TRI</PricingRIC>
            <EstimateActive xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">True</EstimateActive>

```




```
<EstimateCountry xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">USA</EstimateCountry>
<EstimateCurrency xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">USD</EstimateCurrency>
<EstimateExchange xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">NYSE</EstimateExchange>
<EstimateIssueID xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">1</EstimateIssueID>
</EstimateData>
<IsPrimaryRIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_ResultSpec_1">true</IsPrimaryRIC>
<IssuerMXID xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_ResultSpec_1">100042713</IssuerMXID>
<PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">748450</PI>
</Hit>
...
<Hit>
<BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">QUOTE.EQUITY</BusinessEntity>
<DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
  <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Thomson Reuters Corporation, Ordinary, NYSE Arca</Value>
  <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Thomson Reuters Corporation</SubjectName>
  <SimpleType xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Ordinary</SimpleType>
  <Source xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">NYSE Arca</Source>
</DocumentTitle>
<EstimateData xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_ResultSpec_1">
  <EstimateID xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">CA_A2651_1</EstimateID>
  <Repno xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">A2651</Repno>
  <RepnoName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">"Thomson Reuters Corporation"</RepnoName>
  <PricingRIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">TRI.TO</PricingRIC>
  <EstimateActive xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">True</EstimateActive>
  <EstimateCountry xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">CAN</EstimateCountry>
  <EstimateCurrency xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">USD</EstimateCurrency>
  <EstimateExchange xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">TSE</EstimateExchange>
  <EstimateIssueID xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">1</EstimateIssueID>
</EstimateData>
...
<EstimateData xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_ResultSpec_1">
  <EstimateID xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">US_A489F_1</EstimateID>
  <Repno xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">A489F</Repno>
  <RepnoName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">"Thomson Reuters Corporation (USA)"</RepnoName>
  <PricingRIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">TRI</PricingRIC>
  <EstimateActive xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">True</EstimateActive>
  <EstimateCountry xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">USA</EstimateCountry>
  <EstimateCurrency xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">USD</EstimateCurrency>
  <EstimateExchange xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">NYSE</EstimateExchange>
  <EstimateIssueID xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">1</EstimateIssueID>
</EstimateData>
<IsPrimaryRIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_ResultSpec_1">>false</IsPrimaryRIC>
<IssuerMXID xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_ResultSpec_1">100042713</IssuerMXID>
<PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">8002074</PI>
</Hit>
</Result>
```



```
</GetEquityQuote_Response_1>
</Body>
</Envelope>
```

40.3.6.9 Retrieving MXID by Company Name

This request returns MXID by company name.

XML Sample Request - Retrieving MXID by Company Name

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Search/Search.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_1/GetEquityQuote_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetEquityQuote_Request_1 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
      xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_1">
      <Filter>
        <IsPrimaryRIC Include="true" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_QuerySpec_1">
          <BooleanValue Value="true" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes"/>
        </IsPrimaryRIC>
        <RIC Include="true" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_QuerySpec_1"/>
      </Filter>
      <Query>
        <Name Include="true" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/RequestDefaultFields">
          <StringValue Value="Microsoft" Negated="false" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes"/>
        </Name>
        <IssuerMXID Include="true" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_QuerySpec_1"/>
      </Query>
    </GetEquityQuote_Request_1>
  </Body>
</Envelope>
```

XML Sample Response - Retrieving MXID by Company Name

```
<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_1/GetEquityQuote_1_Reply</a:Action>
    </a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetEquityQuote_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_1">
      <ResultHeader xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">
        <FirstHit>1</FirstHit>
        <LastHit>1</LastHit>
        <Hits>1</Hits>
        <TotalHits>1</TotalHits>
        <ExecutionTime>282</ExecutionTime>
        <Duration>328</Duration>
      </ResultHeader>
      <NavigatorList xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes"/>
      <Result>
        <Hit>
          <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">QUOTE.
            EQUITY</BusinessEntity>
          <DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
```




```

<Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Microsoft Corp,
Ordinary, Consolidated Issue Listed on NASDAQ Global Select Market</Value>
<SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Microsoft
Corp</SubjectName>
<SimpleType xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Ordinary</
SimpleType>
<Source xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Consolidated Issue
Listed on NASDAQ Global Select Market</Source>
</DocumentTitle>
<IsPrimaryRIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_ResultSpec_1">true</
IsPrimaryRIC>
<IssuerMXID xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_ResultSpec_1">
100089359</IssuerMXID>
<PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">733337</PI>
<RIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_ResultSpec_1">MSFT.O</RIC>
</Hit>
</Result>
</GetEquityQuote_Response_1>
</Body>
</Envelope>

```

40.3.6.10 Retrieving MXID by Company Symbol

This request returns MXID by company symbol.

XML Sample Request - Retrieving MXID by Company Symbol

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Search/Search.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_1/
GetEquityQuote_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetEquityQuote_Request_1 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_1">
      <Filter>
        <Code Include="true" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/RequestDefaultFields">
          <SymbolValue ExactMatch="false" Value="TRIL" Negated="false" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/
rkd/Search/QuerySpecDatatypes" />
          <SymbolValue ExactMatch="false" Value="MSFT" Negated="false" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/
rkd/Search/QuerySpecDatatypes" />
        </Code>
        <IsPrimaryRIC Include="true" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_QuerySpec_1">
          <BooleanValue Value="true" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes" />
        </IsPrimaryRIC>
        <RIC Include="true" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_QuerySpec_1" />
      </Filter>
      <Query>
        <IssuerMXID Include="true" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_QuerySpec_1" />
      </Query>
    </GetEquityQuote_Request_1>
  </Body>
</Envelope>

```

XML Sample Response - Retrieving MXID by Company Symbol

```

<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/rkd/
Search/EquityQuote_1/GetEquityQuote_1_Reply

```



```

</a:Action>
<a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
</s:Header>
<s:Body>

  <GetEquityQuote_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_1">
    <ResultHeader xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">
      <FirstHit>1</FirstHit>
      <LastHit>5</LastHit>
      <Hits>5</Hits>
      <TotalHits>5</TotalHits>
      <ExecutionTime>375</ExecutionTime>
      <Duration>422</Duration>
    </ResultHeader>
    <NavigatorList xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes"/>
    <Result>
      <Hit>
        <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">QUOTE.
          EQUITY</BusinessEntity>
        <DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
          <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Microsoft Corp,
            Ordinary, Consolidated Issue Listed on NASDAQ Global Select Market</Value>
          <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Microsoft
            Corp</SubjectName>
          <SimpleType xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Ordinary</
            SimpleType>
          <Source xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Consolidated Issue
            Listed on NASDAQ Global Select Market</Source>
        </DocumentTitle>
        <IsPrimaryRIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_ResultSpec_1">true</
          IsPrimaryRIC>
        <IssuerMXID xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_ResultSpec_1">
          100089359</IssuerMXID>
        <PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">733337</PI>
        <RIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_ResultSpec_1">MSFT.O</RIC>
      </Hit>
      <Hit>
        <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">QUOTE.
          EQUITY</BusinessEntity>
        <DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
          <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Thomson Reuters
            PLC, Ordinary, MiFID Top Liquidity Security, London Stock Exchange</Value>
          <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Thomson
            Reuters PLC</SubjectName>
          <SimpleType xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Ordinary</
            SimpleType>
          <Characteristics xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">MiFID Top
            Liquidity Security</Characteristics>
          <Source xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">London Stock
            Exchange</Source>
        </DocumentTitle>
        <IsPrimaryRIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_ResultSpec_1">true</
          IsPrimaryRIC>
        <IssuerMXID xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_ResultSpec_1">
          106867600</IssuerMXID>
        <PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">1049418</PI>
        <RIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_ResultSpec_1">TRIL.L</RIC>
      </Hit>
      <Hit>
        <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">QUOTE.
          EQUITY</BusinessEntity>
        <DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
          <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Megasoft Ltd,
            Ordinary, Bombay Stock Exchange</Value>
          <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Megasoft
            Ltd</SubjectName>
          <SimpleType xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Ordinary</
            SimpleType>
          <Source xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Bombay Stock
            Exchange</Source>
        </DocumentTitle>
        <IsPrimaryRIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_ResultSpec_1">true</
          IsPrimaryRIC>
        <PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">13743734</PI>
        <RIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_ResultSpec_1">MSFT.BO</RIC>
      </Hit>
    </Result>
  </GetEquityQuote_Response_1>

```



```

<Hit>
  <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">QUOTE.
  EQUITY</BusinessEntity>
  <DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
    <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Masafat For
    Specialized Transportation, Ordinary, Amman Financial Market</Value>
    <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Masafat For
    Specialized Transportation</SubjectName>
    <SimpleType xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Ordinary</
    SimpleType>
    <Source xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Amman Financial
    Market</Source>
  </DocumentTitle>
  <IsPrimaryRIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_ResultSpec_1">true</
  IsPrimaryRIC>
  <PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">27422658</PI>
  <RIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_ResultSpec_1">MSFT.AM</RIC>
</Hit>
<Hit>
  <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">QUOTE.
  EQUITY</BusinessEntity>
  <DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
    <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Transcon Research
    & Infotech Ltd, Ordinary, Bombay Stock Exchange</Value>
    <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Transcon
    Research & Infotech Ltd</SubjectName>
    <SimpleType xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Ordinary</
    SimpleType>
    <Source xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Bombay Stock
    Exchange</Source>
  </DocumentTitle>
  <IsPrimaryRIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_ResultSpec_1">true</
  IsPrimaryRIC>
  <PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">1148553</PI>
  <RIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_ResultSpec_1">TRIL.BO</RIC>
</Hit>
</Result>
</GetEquityQuote_Response_1>
</Body>
</Envelope>

```

40.3.6.11 Retrieving Estimate ID by Company Name

This request returns EstimateID by company name.

XML Sample Request - Retrieving EstimateID by Company Name

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Search/Search.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_1/
    GetEquityQuote_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetEquityQuote_Request_1 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
    xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_1">
      <Filter>
        <IsPrimaryRIC Include="true" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_QuerySpec_1">
          <BooleanValue Value="true" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes"/>
        </IsPrimaryRIC>
        <RIC Include="true" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_QuerySpec_1"/>
      </Filter>
      <Query>
        <Name Include="true" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/RequestDefaultFields">

```



```

    <StringValue Value="Microsoft" Negated="false" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
    QuerySpecDatatypes"/>
  </Name>
  <EstimateData Include="true" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
  EquityQuote_QuerySpec_1"/>
</Query>
</GetEquityQuote_Request_1>
</Body>
</Envelope>

```

40.3.6.12 Retrieving Estimate IDs by Company Symbols

This request returns Estimate IDs by company symbols.

XML Sample Request - Retrieving Estimate IDs by Company Symbols

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Search/Search.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_1/
    GetEquityQuote_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetEquityQuote_Request_1 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
    xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_1">
      <Filter>
        <Code Include="true" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/RequestDefaultFields">
          <SymbolValue ExactMatch="false" Value="TRIL" Negated="false" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/
          rkd/Search/QuerySpecDatatypes" />
          <SymbolValue ExactMatch="false" Value="MSFT" Negated="false" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/
          rkd/Search/QuerySpecDatatypes" />
        </Code>
        <IsPrimaryRIC Include="true" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_QuerySpec_1">
          <BooleanValue Value="true" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes" />
        </IsPrimaryRIC>
        <RIC Include="true" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/EquityQuote_QuerySpec_1" />
      </Filter>
      <Query>
        <EstimateData Include="true" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
        EquityQuote_QuerySpec_1" />
      </Query>
    </GetEquityQuote_Request_1>
  </Body>
</Envelope>

```

40.3.7 Fund Quote (GetFundQuote_1)

This operation gives access and ability to search on information related to Fund Quotes.

40.3.7.1 Service Endpoint and Required Headers

Service Endpoint

Thomson Reuters Fund Quote Search Endpoint

<http://api.rkd.reuters.com/api/Search/FundQuote.svc>



Required Header**Required HTTP Headers**

POST /api/Search/FundQuote.svc HTTP/1.1
 Content-Type: application/soap+xml
 Host: api.rkd.reuters.com
 Content-Length: [length]

40.3.7.2 WSDL**WSDL:**

http://api.rkd.reuters.com/schemas/Search/wsdl/FundQuote_1_HttpAndRKDTOKEN.wsdl

40.3.7.3 Fund Search with Currency and Exchange Information

The following example searches for funds for BankINV dealing in Euros on the Copenhagen Stock Exchange. The request is set to return the following information:

- Currency
- ExchangeName
- CommonName
- RIC

XML Sample Request - Search Fund Quote with Currency and Exchange Information

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Search/FundQuote.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/FundQuote_1/GetFundQuote_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetFundQuote_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/FundQuote_1">
      <Filter>
        <Currency xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/FundQuote_QuerySpec_1" Include="true">
          <StringValue xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes" Value="Eur" Negated="false" />
        </Currency>
        <ExchangeName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/FundQuote_QuerySpec_1" Include="true">
          <StringValue xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes" Value="Copenhagen Stock Exchange" Negated="false" />
        </ExchangeName>
      </Filter>
      <Query>
        <Search xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/RequestDefaultFields" Include="true">
          <StringValue xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes" Value="BankInv" Negated="false" />
        </Search>
        <CommonName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/RequestDefaultFields" Include="true" />
        <RIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/FundQuote_QuerySpec_1" Include="true" />
      </Query>
    </GetFundQuote_Request_1>
  </Body>
</Envelope>
```

XML Sample Response - Search Fund Quote with Currency and Exchange Information

```

<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/FundQuote_1/GetFundQuote_1_Reply
    </a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetFundQuote_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/FundQuote_1">
      <ResultHeader xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">
        <FirstHit>1</FirstHit>
        <LastHit>2</LastHit>
        <Hits>2</Hits>
        <TotalHits>2</TotalHits>
        <ExecutionTime>0</ExecutionTime>
        <Duration>78</Duration>
        <SpellingSuggestion>"banking"</SpellingSuggestion>
      </ResultHeader>
      <NavigatorList xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes" />
      <Result>
        <Hit>
          <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">QUOTE.FUND</BusinessEntity>
          <PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">22400857</PI>
          <DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
            <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">BankInv GI Emkt Open Fund, Open Fund, EUR, Copenhagen Stock Exchange</Value>
            <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">BankInv GI Emkt Open Fund</SubjectName>
            <SimpleType xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Open Fund</SimpleType>
            <Characteristics xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">EUR</Characteristics>
            <Source xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Copenhagen Stock Exchange</Source>
          </DocumentTitle>
          <CommonName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/FundQuote_ResultSpec_1">BANKINV GL EMKT</CommonName>
          <Currency xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/FundQuote_ResultSpec_1">EUR</Currency>
          <ExchangeName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/FundQuote_ResultSpec_1">Copenhagen Stock Exchange</ExchangeName>
          <RIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/FundQuote_ResultSpec_1">BAIGEM.CO</RIC>
        </Hit>
        <Hit>
          <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">QUOTE.FUND</BusinessEntity>
          <PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">22401235</PI>
          <DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
            <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">BankInv GI Em Bd Open Fund, Open Fund, EUR, Copenhagen Stock Exchange</Value>
            <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">BankInv GI Em Bd Open Fund</SubjectName>
            <SimpleType xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Open Fund</SimpleType>
            <Characteristics xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">EUR</Characteristics>
            <Source xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Copenhagen Stock Exchange</Source>
          </DocumentTitle>
          <CommonName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/FundQuote_ResultSpec_1">BANKINV GL EM BD</CommonName>
          <Currency xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/FundQuote_ResultSpec_1">EUR</Currency>
          <ExchangeName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/FundQuote_ResultSpec_1">Copenhagen Stock Exchange</ExchangeName>
          <RIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/FundQuote_ResultSpec_1">BAIEMB.CO</RIC>
        </Hit>
      </Result>
    </GetFundQuote_Response_1>
  </s:Body>
</Envelope>

```



40.3.8 Government and Corporate Bond Instruments (GetGovCorpInst_1)

This operation makes available all Government and Corporate Bonds at instrument level. Instrument level is used to store all details about a Bond's terms and conditions.

40.3.8.1 Service Endpoint and Required Headers

Service Endpoint

Thomson Reuters Government and Corporate Bond Instruments Search Endpoint

<http://api.rkd.reuters.com/api/Search/GovCorpInst.svc>

Required Header

Required HTTP Headers

POST /api/Search/GovCorpInst.svc HTTP/1.1
Content-Type: application/soap+xml
Host: api.rkd.reuters.com
Content-Length: [length]

40.3.8.2 WSDL

WSDL:

http://api.rkd.reuters.com/schemas/Search/wsd/GetGovCorpInst_1_HttpAndRKDTOKEN.wsdl

40.3.8.3 Search on Government and Corporate Bond Instruments

The example below demonstrates a Government and Corporate Bond Instruments search by using Contributor Code, Coupon Rate, a range for Maturity Date and Moodys Rating Ranking as search criteria. The search retrieves the following information:

- CouponRate
- MaturityDate
- RIC

XML Sample Request - Search Fund Quote with Currency and Exchange Information

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Search/GovCorpInst.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/GovCorpInst_1/GetGovCorpInst_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetGovCorpInst_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/GovCorpInst_1">
      <Filter>
        <CouponRate xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/GovCorpInst_QuerySpec_1"
          Include="true">
          <NumberValue xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes"
            ExpressionType="GreaterThan" Value="9" Negated="false" />
        </CouponRate>
        <MaturityDate xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/GovCorpInst_QuerySpec_1"
          Include="true">
          <DateValue xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes"
            ExpressionType="GreaterThan" Value="2007-01-01" Negated="false" />
        </MaturityDate>
      </Filter>
    </GetGovCorpInst_Request_1>
  </Body>
</Envelope>
```




```

<RIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/GovCorpInst_QuerySpec_1" Include="true" />
</Query>
</GetGovCorpInst_Request_1>

</Body>
</Envelope>

```

XML Sample Response - Search Fund Quote with Currency and Exchange Information

```

<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/GovCorpInst_1/GetGovCorpInst_1_Reply</a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetGovCorpInst_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/GovCorpInst_1">
      <ResultHeader xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">
        <FirstHit>1</FirstHit>
        <LastHit>38</LastHit>
        <Hits>38</Hits>
        <TotalHits>38</TotalHits>
        <ExecutionTime>47</ExecutionTime>
        <Duration>109</Duration>
      </ResultHeader>
      <NavigatorList xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes" />
      <Result>
        <Hit Index="1">
          <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">INSTRUMENT.FIXEDINCOME.GOVCORP</BusinessEntity>
          <CouponRate xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/GovCorpInst_ResultSpec_1">9.75</CouponRate>
          <DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
            <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Qatar, State of, Fixed Rate Bond, QATAR 9.750 15-Jun-2030</Value>
            <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Qatar, State of</SubjectName>
            <SimpleType xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Fixed Rate Bond</SimpleType>
            <Characteristics xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">QATAR 9.750 15-Jun-2030</Characteristics>
          </DocumentTitle>
          <MaturityDate xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/GovCorpInst_ResultSpec_1">2030-06-15T00:00:00Z</MaturityDate>
          <PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">0x0002a0006fd2617e</PI>
          <RIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/GovCorpInst_ResultSpec_1">QA011341969=</RIC>
        </Hit>
        <Hit Index="2">
          <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">INSTRUMENT.FIXEDINCOME.GOVCORP</BusinessEntity>
          <CouponRate xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/GovCorpInst_ResultSpec_1">23.188</CouponRate>
          <DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
            <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Italy, Republic Of, Fixed Rate Bond, ITALY 23.188 20-Feb-2031</Value>
            <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Italy, Republic Of</SubjectName>
            <SimpleType xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Fixed Rate Bond</SimpleType>
            <Characteristics xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">ITALY 23.188 20-Feb-2031</Characteristics>
          </DocumentTitle>
          <MaturityDate xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/GovCorpInst_ResultSpec_1">2031-02-20T00:00:00Z</MaturityDate>
          <PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">0x0002a000552b70ac</PI>
          <RIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/GovCorpInst_ResultSpec_1">XS0124812503=R</RIC>
        </Hit>
        ...
      </Result>
    </GetGovCorpInst_Response_1>
  </s:Body>
</Envelope>

```




```
</Result>
</GetGovCorpInst_Response_1>

</Body>
</Envelope>
```

40.3.9 Index Instruments

This web service returns index instruments, in other words details of indices themselves.

Note: Thomson Reuters Search on Index Instruments retrieves all available data on index instruments, while Thomson Reuters Search on Index Quote retrieves only the data you are permitted for.

40.3.9.1 Service Endpoint and Required Headers

Service Endpoint

Thomson Reuters Index Instruments Search Endpoint

<http://api.rkd.reuters.com/api/Search/IndexInst.svc>

Required Header

Required HTTP Headers

POST /api/Search/IndexInst.svc HTTP/1.1
Content-Type: application/soap+xml
Host: api.rkd.reuters.com
Content-Length: [length]

40.3.9.2 WSDL

WSDL:

http://api.rkd.reuters.com/schemas/Search/wsd/IndexInst_1_HttpAndRKDToken.wsdl

40.3.10 Index Quote

The Index Quote operation is used to search for Index Quotes. It can be used to drill-down from Index instruments using PI from Instrument level and BaseAssetPI from the Quote level.

Note: Thomson Reuters Search on Index Instruments retrieves all available data on index instruments, while Thomson Reuters Search on Index Quote retrieves only the data you are permitted for.

40.3.10.1 Service Endpoint and Required Headers

Service Endpoint

Thomson Reuters Index Quote Search Endpoint

<http://api.rkd.reuters.com/api/Search/IndexQuote.svc>

Required Header

Required HTTP Headers

POST /api/Search/IndexQuote.svc HTTP/1.1
Content-Type: application/soap+xml
Host: api.rkd.reuters.com
Content-Length: [length]



40.3.10.2 WSDL

WSDL:

http://api.rkd.reuters.com/schemas/Search/wsd/IndexQuote_1_HttpAndRKDToken.wsdl

40.3.10.3 Retrieving Index by PI

In this example we retrieve the RIC by using the PI number 12003613.

XML Sample Request - Search Fund Quote with Currency and Exchange Information

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/Search/IndexQuote.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/IndexQuote_1/GetIndexQuote_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetIndexQuote_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/IndexQuote_1">
      <Query>
        <PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/RequestDefaultFields" Include="true">
          <StringValue xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/QuerySpecDatatypes"
            Value="12003613" Negated="false" />
        </PI>
        <RIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/IndexQuote_QuerySpec_1" Include="true" />
      </Query>
    </GetIndexQuote_Request_1>
  </Body>
</Envelope>
```

XML Sample Response - Search Fund Quote with Currency and Exchange Information

```
<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/IndexQuote_1/GetIndexQuote_1_Reply</a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetIndexQuote_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/IndexQuote_1">
      <ResultHeader xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">
        <FirstHit>1</FirstHit>
        <LastHit>1</LastHit>
        <Hits>1</Hits>
        <TotalHits>1</TotalHits>
        <ExecutionTime>31</ExecutionTime>
        <Duration>78</Duration>
      </ResultHeader>
      <NavigatorList xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes" />
      <Result>
        <Hit>
          <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">QUOTE.
            INDEX</BusinessEntity>
          <PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">12003613</PI>
          <DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
            <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">FTSEUROFIRST
              100, Index Quote, United Kingdom, FTSE International</Value>
            <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">FTSEUROFIRST 100</SubjectName>
          </DocumentTitle>
        </Hit>
      </Result>
    </GetIndexQuote_Response_1>
  </s:Body>
</s:Envelope>
```



```

<SimpleType xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Index
Quote</SimpleType>
<Characteristics xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">United
Kingdom</Characteristics>
<Source xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">FTSE
International</Source>
</DocumentTitle>
<RIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/IndexQuote_ResultSpec_1">.FTEFC1R</RIC>
</Hit>
</Result>
</GetIndexQuote_Response_1>
</Body>
</Envelope>

```

40.4 Understanding the Thomson Reuters Search Response

The Thomson Reuters Search response consists of the following sections:

- **Result Header** - contains information about the result set.
- **Navigator List** - provides analytic on the results in the form of a Navigator list.
- **Result** - the Result element of the response can contain zero or many "Hit" records.

40.4.1 Result Header

The Result Header will contain information describing the returned result set. The header is provided in all Search operations responses.

XML Sample Response - Search All Response for a specific Index

```

<ResultHeader xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">
  <FirstHit>1</FirstHit>
  <LastHit>19</LastHit>
  <Hits>19</Hits>
  <TotalHits>19</TotalHits>
  <ExecutionTime>16</ExecutionTime>
  <Duration>63</Duration>
  <SpellingSuggestion>"vodafone"</SpellingSuggestion>
</ResultHeader>

```

Attribute	Description
FirstHit	The offset or pivot value of the first result in current set of results.
LastHit	The offset of the last result in the current set of results.
Hits	The number of records included in this current set of results.
TotalHits	The total number of records identified by the search engine.
ExecutionTime	The execution time (in milliseconds) of the query.
Duration	The total duration of the query, including the processing overhead incurred by the SQS.
SpellingSuggestion	Suggests spelling.

40.4.2 Navigator List

Navigator List provides analytics on a set of results. By setting the Navigation attribute equal to true for a specific field in the Request (for fields that support Navigation) you indicate that you want the response to contain a break down of records according to the categories associated with that field.

XML Sample Response - Search All Response with Navigate



```

<NavigatorList xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">
  <StringNavigator FieldName="AssetCategoryName" HitCount="303" Entropy="1.208660933"
    Ratio="0.9837662338" Score="1.20866096" SampleCount="303">
    <Modifier Value="Equity/Equity/Index Warrant" Count="165" />
    <Modifier Value="United States" Count="106" />
    <Modifier Value="Israel" Count="5" />
    <Modifier Value="United Kingdom" Count="5" />
    <Modifier Value="Canada" Count="3" />
    ...
  </StringNavigator>
</NavigatorList>

```

Attribute	Description
StringNavigator	This element provides general information about the navigation list. Contains the following attributes: • FieldName: The name of the field to which the analytic relates. • HitCount: The total number records identified in the query for which the analytic was generated. • Entropy: • Ratio: • Score: • Min: The minimum value identified for the field (Only applicable to numeric and date analytics). • Max: The maximum value identified for the field (Only applicable to numeric and date analytics). • Mean: The mean average value identified for the field (Only applicable to numeric and date analytics). • SampleCount: The number of records on which the analytic was generated. Maybe different to the value for "HitCount".
Modifier	A Modifier element is created for each analysis item. Contains the following attributes: • Count: The number of records that would be returned by applying the criteria defined by this analytic modifier. • Value: The value that this analytic is describing. For numeric analytics, this specifies the lower boundary of the range expressed by this modifier. • UpperValue: The upper boundary of the analytic range (Only applicable to numeric and date analytics).

40.4.3 Result

The Result element of the response can contain zero or many "Hit" records. In the case of the result fields contained by each hit, the data types are no longer required to express criteria for a search query. With the exception of the "DocumentTitle" field, each field is described in terms of its native xml schema data type.

XML Sample Response - Search All Response with Navigate

```

<Result>
  <Hit>
    <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
      ResponseDefaultFields">ORGANISATION</BusinessEntity>
    <DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
      <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Vodafone
        Group Plc</Value>
      <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
        ResultSpecDatatypes">Vodafone Group Plc</SubjectName>
    </DocumentTitle>
    <PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">10749</PI>
    <PrimaryRIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_ResultSpec_1">VOD.L</
      PrimaryRIC>
    </Hit>
  </Hit>
  <Hit>
    <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
      ResponseDefaultFields">ORGANISATION</BusinessEntity>

```



```

<DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
  <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Vodafone
  Egypt Telecommunications Company</Value>
  <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
  ResultSpecDatatypes">Vodafone Egypt Telecommunications Company</SubjectName>
</DocumentTitle>
<PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">2512496</PI>
<PrimaryRIC xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/Searchall_ResultSpec_1">VODE.
CA</PrimaryRIC>
</Hit>
...
<Hit>
  <BusinessEntity xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
  ResponseDefaultFields">INSTRUMENT.FIXEDINCOME.GOVCORP</BusinessEntity>
  <DocumentTitle xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResponseDefaultFields">
    <Value xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Vodafone
    Group PLC, Fixed Rate Bond, VOD 5.125 10-Apr-2015</Value>
    <SubjectName xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
    ResultSpecDatatypes">Vodafone Group PLC</SubjectName>
    <SimpleType xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">Fixed
    Rate Bond</SimpleType>
    <Characteristics xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/ResultSpecDatatypes">VOD
    5.125 10-Apr-2015</Characteristics>
  </DocumentTitle>
  <PI xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Search/
  ResponseDefaultFields">0x00038600556940f9</PI>
</Hit>
</Result>

```

The following are the default fields returned for every request.

Attribute	Description
BusinessEntity	Shows business entity.
PI	The unique identifier for each document in the index.
DocumentTitle	For display purposes the fields that best describes the result.



chapter 41 Screener

You can use Thomson Reuters Screener to filter companies according to a set of criteria and return information about those companies. Screening provides the capability to select a subset of available companies and subset of variables describing those companies very quickly. The Screener operates with various data objects and variable lists.

Screening is logically broken into two pieces:

- **Screening**

Screening is the ability to specify filter data ("Screening profile") to apply against a large universe of companies to produce a much shorter list of companies for consideration ("Screened result set"). For example, select all companies with a P/E greater than X, closing price greater than Y, with a rating of Buy. The screening system performs all normal mathematical and logical operations on the underlying fundamental, forecast and pricing data.

- **Report Writing**

Report writing is the ability to take the screened result set and output those companies with specific data fields. The data fields involved may be different than those involved with the screening profile. The definition of those data fields is called a "report format". Screening and report writing are integrated into a single TRKD API call.

41.1 Authentication/Authorization, Service Endpoint, and Required Headers

Authorization

All requests to the Thomson Reuters Screener service require an authorization token. For details, see section Understanding Authentication Tokens.

Authentication

Thomson Reuters Screener uses Reuters impersonation tokens for each effective user. In this case, Thomson Reuters must create each user before your application authenticates them. Unmanaged effective users are not supported in Thomson Reuters Screener.

For additional information, see section Creating a Token.

Service Endpoint

Thomson Reuters Screener Endpoint

`http://api.rkd.reuters.com/api/Screener/Screener.svc`

Required Header

Required HTTP Headers

POST api/Screener/Screener.svc HTTP/1.1
Content-Type: application/soap+xml
Host: api.rkd.reuters.com
Content-Length: [length]

41.2 WSDL

WSDL:



http://api.rkd.reuters.com/schemas/Screener/wsd/Screener_1_HttpAndRKDToken.wsdl

41.3 Data Organization

The Screener operates on data about companies and associated variables against those companies. The Screener allows the data to be defined in separate "sections". These sections allow the compilation of data that respect either generation requirements or entitlement requirements. Those entitlement requirements will respect contractual obligations.

41.4 Variables

Variables represent a unit of data for particular company. For each variable the Screener has the following attributes:

- **Name**
Up to 40 characters. Note that all names in Screener are case-insensitive.
- **Type**
An enumeration (such as Boolean, string etc.) described by the following schema fragment:

```
<xs:restriction base="xs:string">  
  <xs:enumeration value="vtString"/>  
  <xs:enumeration value="vtNumber"/>  
  <xs:enumeration value="vtBoolean"/>  
  <xs:enumeration value="vtDate"/>  
  <xs:enumeration value="vtEnum"/>  
  <xs:enumeration value="vtArray"/>  
</xs:restriction>
```

The meanings are obvious with the exception of this value of the enumeration:

~ "vtEnum" is used when variable can have limited set of values, such as zip codes, area codes, names of the analysts etc.

- **Prec**
The precision of "vtNumber". Integer values are represented by precision equal to 0. The Screener provides data conversion based on "prec" attribute. The Screener drops trailing zeros and rounds the data. For example:
if precision is 3: - "8.500" becomes 8.5
if precision is 1 - "8.56" becomes "8.6"
if precision is 1 - "8.54" becomes "8.5"
- **Desc**
Description. This field usually contains short description of the variable. For example, "Consensus recommendation".
- **Body**
This attribute usually contains a long description of the variable. The user interface can use this value as a means of a help screen for the variable. It is useful to keep the full description as HTML.
- **Head**
The column title. It can be up to 1024 symbols. This attribute usually contains up to three words divided by <CR><LF>. The user interface can use it as a title for a corresponding column.

The variable definitions contain all the information required for the creation of data-driven front end. The ability to create a data-driven interface is one of the principals behind the Screener design. It is only also possible to get all variables available to your application. Each variable has enough attributes associated with it to all a display for a user interface to be constructed.

41.4.1 Getting Actual Codes for Variables

You can use **vEnum** value for fields attribute in Get Variable request to retrieve codes and values for variables of enum type.

"fields" value descriptions:

Value	Description
vType	Type
vDesc	Description
vPrec	Precision of floating point variables
vBody	Long description
vEnum	Code and names of enumeration value if variable is enum type

Example:

Request:

```
<GetVar_Request_1 xmlns="http://www.reuters.com/ns/2009/10/01/webservices/rkd/Screener_1" fields="vType vPrec vHead vDesc vBody vEnum" />
```

Response:

```
<GetVar_Response_1 xmlns="http://www.reuters.com/ns/2009/10/01/webservices/rkd/Screener_1">
  <!-- cut to reduce the size -->
  <var desc="Region Code" name="RegionCode" prec="0" type="vtEnum">
    <enum code="AP">Asia Pacific</enum>
    <enum code="EU">Europe and Africa</enum>
    <enum code="NA">Americas</enum>
    <body>Region Code for country of Exchange</body>
  </var>
  <!-- cut to reduce the size -->
</GetVar_Response_1>
```

In Calculate request you can use value codes retrieved by the Get Variable request:

```
<criteria>IS IN SET ({RegionCode},{EU,AP})</criteria>
```

41.5 Lists

This section provides information on company lists.

41.5.1 Company Lists

A company list is a defined list of companies to limit selection of company rows from. Use this feature to provide screening capability on watch lists or portfolios. Another useful type of the company list is a list presented as a screening criterion. An example would be "North American active companies". This list can be represented by expression:

```
Is In Set({Exchange},{AMEX,NASD,NYSE,OTC}).AND.{IsActive}
```

This expression uses the "Is In Set" Screener function, as well as built-in variable "IsActive". For more details, see section Supported Operations.

Company lists also can be used for three different purposes. First, the usage is to start from particular list as a starting point for subsequent criteria. This list is called "exact" list. In second case the user might compare his/her own companies to the list of the companies passing criteria. Those are called "include" lists. The third type of the list is called an "exclude" list. This is useful if caller wants to figure out what companies pass criteria besides the ones he/she already has.

41.6 Screening

Screening is used to retrieve data from the Screener. You can consider the result of the screen execution as a set of orthogonal matrixes (record sets). Each line in the record set corresponds to the company, and each column corresponds to the variable requested. It is possible to specify which particular columns (variables) to return (see the description of the forms below), to return only the number of companies passing the criterion. Thus, "report writing" is a user interface construct. The Screener resolves criterion and variables requested in the above record sets.

The list of criteria defines the actual search to be performed on the data. Each criterion specifies the subset of the companies to be selected. Each subsequent criterion is applied on top of results of the previous one, and therefore narrows down the list of



companies passing the screen.

41.7 Format

The set of "format" elements defines which variables return from a screen. The Screener can return the row set for last non-suppressed criteria. The role of "format" element is to define which columns will be returned. For additional information, see section Calculation Request.

41.8 Calculation Request

A calculation request is not an object, but is the main screener request to execute a screen and retrieve the associated data. A calculation request is a combination of:

- criteria
- format(s)
- company list(s)

At least one of the above should be present to execute a meaningful screen.

A calculation request "glues" these elements together by setting various attributes of expressions and limiting the sizes and positions of the record sets.

You can suppress the return of row set by criterion using its "content" attribute. This attribute can have one of three values:

- **ctAll** - the default value returns all requested data.
- **ctNone** - returns nothing about this record set.
- **ctNoData** - returns just number of companies passing criterion.

The request can have only one format as expressions in criteria, or none. One format can be applied to all criteria.

If the request uses an "exact" company list, this company list becomes row set number 0. All criteria have one contiguous enumeration regardless if their results are suppressed or not.

The format supplied in the request also has "pos" (position) sub-element. Use this sub-element define how to position the row set and how many rows to return. For example:

```
<pos row="401" rows="100"/>
```

This means "return 100 rows starting from row number 401".

Note: Your application is configured to return a maximum number of rows. The default configuration is 750 rows. If your query exceeds this maximum, you will not receive an error - the Screener simply limits your query to return the configured maximum.

Position can be set by:

- RepoNo
- symbol
- company name
- explicit row number

If more than one of the above is present, the Screener uses only the first one (in the order above).

41.8.1 Using Position for Searching

The request for positioning by symbol or company name (in conjunction with sorting) effectively provides the search capabilities in the screener. For example, a request containing

```
<pos symbol="IBM" rows="100"/>
```

will try to find "IBM" in this record set, and to return 100 rows starting from IBM.

Since a search of the result set is possible, the action on not finding the search criteria needs to be handled. The attribute

"IfNotFound" is used to set this behavior.

41.8.2 Sort Order

You can set the sort order(s) for the row set columns. For example:

```
<form index="-1" fields="cHead cPrec">
  <col name="Ticker" sort="ascend" sortOrder="1" />
  <col name="Name" sort="ascend" sortOrder="0" />
  <col name="Active" />
</form>
```

The above example of the format sets the sorting by "Company Name", and then by "Ticker"; both sorts ascending.

41.8.3 Statistics

The caller can also request five different kinds of statistics for a column:

- total
- average
- minimum
- maximum
- standard deviation

41.9 Supported Operations

Lexem(s)	Priority*	Supported Types*	Description
(,)	special	-	Parentheses
+	3	number, date, set	Addition
-	3	number, date, set	Subtraction
*	4	number, date	Multiplication
/	4	number, date	Division
<	2	string, number, date, boolean, set	Less
>	2	string, number, date, boolean, set	Greater
<=	2	string, number, date, boolean, set	Less or equal
>=	2	string, number, date, boolean, set	Greater or equal
=,==	2	string, number, date, boolean, set, NA, NM	Equal
<>,!=	2	string, number, date, boolean, set, NA, NM	Not equal
AND, .AND., &&	1	-	Boolean
OR, .OR.,	0	-	Boolean
NOT, .NOT., !	5	-	Boolean
IS [NOT] IN SET(<var>, <array>)	6	-	Is used to check if variable <var> is in the array <array>. Works only with string, enumeration variables
{ <name> }	6	-	Variable(field) <name>.
'string', "string", string	-	-	-
[digits].[.][digits]	-	-	Number argument
T, F, TRUE, FALSE	-	-	-
m[m]/d[d]/y[y][yy], m[m]-d[d]-y[y][yy]	-	-	Date argument (long format). m - month, d - day, y - year



m[m]/y[y][yy], m[m]-y[y][yy]	-	-	Date argument (short format). m - month, y - year
[comma-separated text]	-	-	Array argument. Used only in IS [NOT] IN SET operation as a second argument
NA	-	-	Special argument to indicate the NA value (from "Not Available")
NM	-	-	Special argument to indicate NM value (from "No Match")

* - 0 is the lowest priority, 6 is the highest priority. Operation with the highest priority will be executed first.

* - For the operations with the same priority left-to-right order of execution is presumed.

41.10 Supported Functions

The Screener allows the use of Statistical Functions in expressions. These functions can be included in expressions, in requests, as well as in column definitions. Statistics function is calculated over a set of companies (a sample). The initial set of companies (which is received from the selected datasets) becomes a sample for the first criteria. The first criterion's result set of companies becomes a sample for the second criteria and for the columns of format assigned to the first criteria. The second criterion's result set of companies becomes a sample for the third criteria and second criterion's format columns and so on and so forth.

The following statistical functions are supported:

Function	Description
^ and **	power (2^3 - raise 2 to the third power), if x or y = NA or NM whole operation returns NA or NM.
EXP(x)	Exponent (e^x), if x = NA or NM whole operation returns NA or NM.
COUNT	Returns the sample size.
COUNT(arg_boolean)	Returns the number of records where arg_boolean is true.
ABS(x)	Absolute value, if x = NA or NM whole operation returns NA or NM.
MIN(x,y)	Returns the lowest numeric value in the sample (returns NM for non-numeric data).
MAX(arg)	Returns the highest numeric value in the sample (returns NM for non-numeric data).
SUM(arg)	Calculates the sum of the numeric sample (returns NM for non-numeric data).
AVG(arg)	Calculates the average (or mean) of the numeric sample (returns NM for non-numeric data).
STDEV(arg)	Calculates the standard deviation of the numeric sample (returns NM for non-numeric data).
WAVG(arg1, arg2)	Calculates the weighted average of the numeric sample arg1 weighted by the numeric sample arg2 (returns NM for non-numeric data).
MEDIAN(arg)	Calculates the median value of the numeric sample (NA and NM values are ignored; returns NM for non-numeric data).
RANK(arg)	Returns the ascending rank of the element arg in the sample (NA and NM values will have NM rank).
RANK(arg,arg_boolean)	Returns the rank of the element (if the arg_boolean is true, in ascending order; if the arg_boolean is false, in descending order) in the sample (NA and NM values will have the rank of NM).
PERCENTILE(arg)	Returns the percentile of the element in ascending order, in the sample (NA and NM values will have the percentile of NM).
PERCENTILE(arg,arg_boolean)	Returns the percentile of the element (if the arg_boolean is true, in ascending order; if the arg_boolean is false, in descending order) in the sample (NA and NM values will have the percentile of NM).
QUARTILE(arg)	Returns the quartile of the element in ascending order, in the sample (NA and NM values will have the quartile of NM).
QUARTILE(arg,arg_boolean)	Returns the quartile of the element (if the arg_boolean is true, in ascending order; if the arg_boolean is false, in descending order) in the sample (NA and NM values will have the quartile of NM).
NTILE(arg,arg_numeric)	Returns the n-tile of the element in ascending order, in the sample. The second argument sets



	the value of n (NA and NM values will have the n-tile of NM).
NTILE(arg,arg_numeric, arg_boolean)	Returns the n-tile of the element (if the arg_boolean is true, in ascending order; if the arg_boolean is false, in descending order) in the sample. The second argument sets the value of n (NA and NM values will have the n-tile of NM).
LN(x)	Natural logarithm (to the base e), if x = NA or NM whole operation returns NA or NM.
LOG(x)	Logarithm to the base 10, if x = NA or NM whole operation returns NA or NM.
IF(x,y,z)	If operation - if x is true then select y otherwise z, if x = NA or NM whole operation returns NA or NM. It is required that Y and Z have the same data type. Otherwise result of expression will case an error on calculation and verification.
IFNA(x,y)	NA test and replacement - if x is NA then use y, otherwise use x.
IFNM(x,y)	NM test and replacement - if x is NM then use y, otherwise use x.
IFN(x,y)	NA and NM test and replacement - if x is NM or NA then use y, otherwise use x.

41.10.1 Numeric Infinity and Not-a-Number

The Screener provides more efficient processing of numeric infinity and not-a-number situations. The following new constants have been added to allow dealing with infinity values, in particular - to allow comparison and produce correct XML response:

- **INF**: Positive infinity
- **-INF**: Negative infinity

In addition, the following functions are available to facilitate the handling of infinity and not-a-number values:

Function	Description
ISNAN(arg)	Returns true if arg is NaN (not-a-number value).
IFNAN(arg1, arg2)	Replace arg1 with arg2 if arg1 is NaN.
IFINF(arg1, arg2)	Replace arg1 with arg2 if arg1 is INF or -INF.

41.10.2 Extended String and Array Comparison Functions

Provided below is a list of functions that support extended string and array comparison:

Function	Description
CONTAINS(arg1, arg2)	If string arg2 is 1) a substring of string arg1 2) an element of array arg1 then returns true, false - otherwise. Case-insensitive.
CONTAINS(arg1, arg2, arg_boolean)	If string arg2 is 1) a substring of string arg1; 2) an element of array arg1 then returns true, false - otherwise. If arg_boolean = TRUE then casesensitive, otherwise - case-insensitive.
arg1 = arg2	If one of the arguments is array, and another is not array, but can be treated as string "=" works as CONTAINS(arg1,arg2).
STARTSWITH(arg1,arg2)	If 1) string arg1 starts with substring arg2; 2) the first element of array arg1 equal to string arg2 then return true, false - otherwise. Case-insensitive.
STARTSWITH(arg1, arg2, arg_boolean)	If 1) string arg1 starts with substring arg2; 2) the first element of array arg1 equal to string arg2 then return true, otherwise - false. If arg_boolean = TRUE then case-sensitive, otherwise - case-insensitive.
ENDSWITH(arg1, arg2)	If 1) string arg1 ends with substring arg2; 2) the last element of array arg1 equal to string arg2 then return true, otherwise - false. Case-insensitive.
ENDSWITH(arg1, arg2, arg_boolean)	If 1) string arg1 ends with substring arg2; 2) the last element of array arg1 equal to string arg2 then return true, false - otherwise. If arg_boolean = TRUE then case-sensitive, otherwise - case-insensitive.

41.11 Example Requests

The next section documents a typical User Interface approach to using the Screener using the external client interface.



41.11.1 Calculation Requests

Calculation requests are used for screening (filtering) companies according to the set of criteria, as well as for data retrieval.

Note: Your application is configured to return a maximum number of rows. The default configuration is 750 rows. If your query exceeds this maximum, you will not receive an error - the Screener simply limits your query to return the configured maximum.

The request below retrieves Ticker, Company Name, the sign of company being active, and price. This request selects the first 100 companies where price is less than 20.

XML Sample Request - Calculation Request

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Screener/Screener.svc/Anonymous</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/10/01/webservices/rkd/Screener_1/Calculate_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <Calculate_Request_1 xmlns="http://www.reuters.com/ns/2009/10/01/webservices/rkd/Screener_1">
      <criteria>{Price}<20</criteria>
      <form>
        <col name="Ticker"/>
        <col name="Name"/>
        <col name="Active"/>
        <col name="Price"/>
        <pos rows="100"/>
      </form>
    </Calculate_Request_1>
  </Body>
</Envelope>
```

Note: The 'Content' attribute can have three values:

1. All
2. None
3. NoData

Please keep in mind that all three values can be applied only to the last criterion specified in the Calculate_1 request. The value "All" is ignored for all other criteria specified in the request.

41.11.2 Getting Variables (GetVar_1)

GetVar requests are used for getting information about all available for user variables.

XML Sample Request - Get Variable

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Screener/Screener.svc/Anonymous</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/10/01/webservices/rkd/Screener_1/GetVar_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetVar_Request_1 fields="vType vDesc vPrec vBody vEnum" xmlns="http://www.reuters.com/ns/2009/10/01/webservices/rkd/Screener_1" />
  </Body>
</Envelope>
```



```
</Body>
</Envelope>
```

The response returns the following information:

XML Sample Response - Get Variable

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2009/10/01/webservices/
rkd/Screener_1/GetVar_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <GetVar_Response_1 xmlns="http://www.reuters.com/ns/2009/10/01/webservices/rkd/Screener_1">
      <var desc="Number of Buy Recommendations, Current" name="#BuyRec_C" prec="0" type="vtNumber">
        <body>Number of Buy Recommendations, Current</body>
      </var>
      <var desc="Number of Hold Recommendations, Current" name="#HoldRec_C" prec="0" type="vtNumber">
        <body>Number of Hold Recommendations, Current</body>
      </var>
      <var desc="Number of Outperform Recommendations, Current" name="#OutPRec_C" prec="0" type="vtNumber">
        <body>Number of Outperform Recommendations, Current</body>
      </var>
      <var desc="Number of Sell Recommendations, Current" name="#SellRec_C" prec="0" type="vtNumber">
        <body>Number of Sell Recommendations, Current</body>
      </var>
      <var desc="Number of Underperform Recommendations, Current" name="#UndPRec_C" prec="0" type="vtNumber">
        <body>Number of Underperform Recommendations, Current</body>
      </var>
      <var desc="Accrued Expenses - Last year, Reporting Currency" name="AccExp_RA" prec="3" type="vtNumber">
        <body>This is Accrued Expenses - Last year, Reporting Currency</body>
      </var>
      <var desc="Accrued Expenses - 1 interim period ago, Reporting Currency" name="AccExp_RPQ" prec="3" type="vtNumber">
        <body>This is Accrued Expenses - 1 interim period ago, Reporting Currency</body>
      </var>
      <var desc="Accrued Expenses - 2 interim periods ago, Reporting Currency" name="AccExp_RPQ2" prec="3" type="vtNumber">
        <body>This is Accrued Expenses - 2 interim periods ago, Reporting Currency</body>
      </var>
    </GetVar_Response_1>
  </Body>
</Envelope>
```

41.11.3 Checking for Validity

Before screening you can use the application to check the expression and variable name for validity. The following example checks the validity of an expression.

XML Sample Request - Checking for Validity

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Screener/Screener.svc/Anonymous</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/10/01/webservices/rkd/Screener_1/Verify_1</
Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <Verify_Request_1 xmlns="http://www.reuters.com/ns/2009/10/01/webservices/rkd/Screener_1">
      <expression>{Price}>20 AND {Price}<=40</expression>
    </Verify_Request_1>
  </Body>
</Envelope>
```



```
</Body>
</Envelope>
```

XML Sample Response - Checking for Validity

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2009/10/01/webservices/
rkd/Screener_1/Verify_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <Verify_Response_1 xmlns="http://www.reuters.com/ns/2009/10/01/webservices/rkd/Screener_1">
      <expression code="ecOK" desc="No errors." pos="0" type="etBoolean">
        <var pos="0">PRICE</var>
        <var pos="15">PRICE</var>
      </expression>
    </Verify_Response_1>
  </Body>
</Envelope>
```

Note that attribute "code" contains "ecOK" value. This means that the expression is syntactically correct.

41.11.4 Screening Company Lists

You can use the Screener to start screening from a particular list of companies. The typical scenario is when a user wants to screen the companies in his/her watch list, or intends to start from certain kind of companies - like US companies, for example.

If you need to screen on top of the explicit list of companies - the Screener uses the term "exact list" for those - use a request like the following:

XML Sample Request - Screening an Exact List

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Screener/Screener.svc/Anonymous</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/10/01/webservices/rkd/Screener_1/
Calculate_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <Calculate_Request_1 xmlns="http://www.reuters.com/ns/2009/10/01/webservices/rkd/Screener_1">
      <form>
        <col name="Ticker"/>
        <col name="Repono"/>
        <col name="Name"/>
      </form>
      <list type="symbol" mode="exact">
        <i>IBM</i>
        <i>INTC</i>
        <i>AMD</i>
        <i>CSCO</i>
        <i>MSFT</i>
      </list>
    </Calculate_Request_1>
  </Body>
</Envelope>
```

Note that the companies in the list element are specified explicitly by their symbols. You can also specify companies Reuters report numbers (REPONO). In this case, set the type of the <list> element to "repono".



41.11.4.1 Using Criteria for an Exact List

You can also specify a list using criteria. For example:

XML Sample Request - Screening an Exact List Based on Criteria

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Screener/Screener.svc/Anonymous</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/10/01/webservices/rkd/Screener_1/Calculate_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <Calculate_Request_1 xmlns="http://www.reuters.com/ns/2009/10/01/webservices/rkd/Screener_1">
      <form>
        <col name="Ticker"/>
        <col name="Repono"/>
        <col name="Name"/>
      </form>
      <list type="symbol" mode="exact">
        <criteria>{Price}>11.5.AND.{Price}<12.5</criteria>
      </list>
    </Calculate_Request_1>
  </Body>
</Envelope>
```

41.11.4.2 Including/Excluding Companies from the List

It is often useful to compare the user watch list to the list of companies that passed screening criteria. To include a list of companies (even if they do not pass the criteria), use a request like the following:

XML Sample Request - Screening with Include

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Screener/Screener.svc/Anonymous</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/10/01/webservices/rkd/Screener_1/Calculate_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <Calculate_Request_1 xmlns="http://www.reuters.com/ns/2009/10/01/webservices/rkd/Screener_1">
      <form>
        <col name="Ticker"/>
        <col name="Repono"/>
        <col name="Name"/>
      </form>
      <list type="symbol" mode="include">
        <i>IBM</i>
        <i>INTC</i>
        <i>AMD</i>
        <i>CSCO</i>
        <i>MSFT</i>
      </list>
    </Calculate_Request_1>
  </Body>
```




```
</Envelope>
```

Note that for this request, mode is set to "include". You can also exclude companies by setting mode to "exclude".

41.11.5 Working with Forms

Forms define what type of output (what columns) the result should contain.

The request below contains the form modifying the output of companies with price greater than 20. The form specifies that Screener should return Ticker, Repono, and Company Name.

XML Sample Request - Simple Form Example

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Screener/Screener.svc/Anonymous</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/10/01/webservices/rkd/Screener_1/Calculate_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <Calculate_Request_1 xmlns="http://www.reuters.com/ns/2009/10/01/webservices/rkd/Screener_1">
      <criteria>{Price}>10</criteria>
      <criteria>{Price}>20</criteria>
      <criteria>{Price}>30</criteria>
      <criteria>{Price}>40</criteria>
      <form>
        <col name="Ticker"/>
        <col name="Repono"/>
        <col name="Name"/>
        <pos rows="10"/>
      </form>
    </Calculate_Request_1>
  </Body>
</Envelope>
```

41.11.6 Positioning, Paging, and Search

The record set returned by certain criteria can be very large. TRKD API configures a maximum number of rows you can return in a single screen request. By default, this maximum is 750 rows. In addition, is possible to specify your own limit to the number of rows returned. Consider request below:

XML Sample Request - Returning 100 Rows

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Screener/Screener.svc/Anonymous</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/10/01/webservices/rkd/Screener_1/Calculate_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <Calculate_Request_1 xmlns="http://www.reuters.com/ns/2009/10/01/webservices/rkd/Screener_1">
      <criteria>{Price}>10</criteria>
      <criteria>{Price}>20</criteria>
      <criteria>{Price}>30</criteria>
    </Calculate_Request_1>
  </Body>
</Envelope>
```



```

    <criteria>{Price}>40</criteria>
    <form>
      <col name="Ticker"/>
      <col name="Repono"/>
      <col name="Name"/>
      <pos rows="100"/>
    </form>
  </Calculate_Request_1>
</Body>
</Envelope>

```

The attribute "rows" of element "pos" element specifies number of rows to return. In this particular case only 100 rows will be returned.

Note: Your application is configured to return a maximum number of rows. The default configuration is 750 rows. If your query exceeds this maximum, you will not receive an error - the Screener simply limits your query to return the configured maximum.

41.11.6.1 Implementing Paging

If the user interface provides some kind of paging, it needs to retrieve a certain subset of the whole record set. Use the "row" attribute to retrieve this subset.

XML Sample Request - Paging Example

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Screener/Screener.svc/Anonymous</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/10/01/webservices/rkd/Screener_1/Calculate_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <Calculate_Request_1 xmlns="http://www.reuters.com/ns/2009/10/01/webservices/rkd/Screener_1">
      <criteria>{Price}>10</criteria>
      <criteria>{Price}>20</criteria>
      <criteria>{Price}>30</criteria>
      <criteria>{Price}>40</criteria>
      <form>
        <col name="Ticker"/>
        <col name="Repono"/>
        <col name="Name"/>
        <pos row="401" rows="100"/>
      </form>
    </Calculate_Request_1>
  </Body>
</Envelope>

```

If you are paging by 100 rows, the request above returns the fifth page of the result set. Note that rows are numbered starting from "1".

41.11.6.2 Searching

You can also position the record set to the row containing a specific company. Effectively this is a searching mechanism. The request below positions the record set to the company with the ticker symbol "BEC":

XML Sample Request - Searching for a Company

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Screener/Screener.svc/Anonymous</To>

```



```

<MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
<Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/10/01/webservices/rkd/Screener_1/
Calculate_1</Action>
<Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
  <ApplicationID>[AppID]</ApplicationID>
  <Token>[service token]</Token>
</Authorization>
</Header>
<Body>
  <Calculate_Request_1 xmlns="http://www.reuters.com/ns/2009/10/01/webservices/rkd/Screener_1">
    <criteria>{Price}>10</criteria>
    <criteria>{Price}>20</criteria>
    <criteria>{Price}>30</criteria>
    <criteria>{Price}>40</criteria>
    <form>
      <col name="Ticker"/>
      <col name="Repono"/>
      <col name="Name"/>
      <pos symbol="BEC" rows="10"/>
    </form>
  </Calculate_Request_1>
</Body>
</Envelope>

```

You can also search by REPONO.

One of the important questions in implementing a search is: what should the behavior be if the search is unsuccessful? The Screener supports two different behaviors:

1. Return nothing (no rows). This is a default behavior.
2. Return rows from the row specified by "row" attribute.

The example above uses the default behavior. For an unsuccessful search, the result is similar to:

XML Sample Response - Unsuccessful Search

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2009/10/01/webservices/
rkd/Screener_1/Verify_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <Calculate_Response_1 xmlns="http://www.reuters.com/ns/2009/10/01/webservices/rkd/Screener_1">
      <rs all="144" found="false" row="145" rows="0">
        <h>
          <c name="Ticker" type="string" />
          <c name="RepoNo" type="string" />
          <c name="Name" type="string" />
          <c name="PRICE" type="number" />
        </h>
      </rs>
    </Calculate_Response_1>
  </Body>
</Envelope>

```

Note that the record set has found="false" and no rows are returned.

To select the second behavior, use the attribute "ifNotFound" with value "pos". For example:

XML Sample Request - Searching for a Company

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Screener/Screener.svc/Anonymous</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
  </Header>
  <Body>
    <Calculate_Request_1 xmlns="http://www.reuters.com/ns/2009/10/01/webservices/rkd/Screener_1">
      <criteria>{Price}>10</criteria>
      <criteria>{Price}>20</criteria>
      <criteria>{Price}>30</criteria>
      <criteria>{Price}>40</criteria>
      <form>
        <col name="Ticker"/>
        <col name="Repono"/>
        <col name="Name"/>
        <pos symbol="BEC" rows="10"/>
      </form>
    </Calculate_Request_1>
  </Body>
</Envelope>

```



```

<Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/10/01/webservices/rkd/Screener_1/
Calculate_1</Action>
<Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
  <ApplicationID>[AppID]</ApplicationID>
  <Token>[service token]</Token>
</Authorization>
</Header>
<Body>
  <Calculate_Request_1 xmlns="http://www.reuters.com/ns/2009/10/01/webservices/rkd/Screener_1">
    <criteria>{Price}>10</criteria>
    <criteria>{Price}>20</criteria>
    <criteria>{Price}>30</criteria>
    <form>
      <col name="Ticker"/>
      <col name="Repono"/>
      <col name="Name"/>
      <pos symbol="BEC" ifNotFound="pos" rows="10"/>
    </form>
  </Calculate_Request_1>
</Body>
</Envelope>

```

In this case, found still will be set to "false" and the last record set will be positioned at row 10.

41.11.7 Grouping

The result from a request can be grouped by relevant columns. For example, the request and response below groups companies under subgroups "Industry", and under the "Industry Sector" group. If more than one grouping column is specified, the result will be in the form of nested groups. The groups can be sorted by the group value and/or by the group's single value columns.

The following is an example Request of Grouping:

XML Sample Request - Grouping Request

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Screener/Screener.svc/Anonymous</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/10/01/webservices/rkd/Screener_1/
    Calculate_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <Calculate_Request_1 xmlns="http://www.reuters.com/ns/2009/10/01/webservices/rkd/Screener_1">
      <criteria content="ctNone">{Active} AND {ExchangeCountryCode}='USA'</criteria>
      <criteria>{Price}>100</criteria>
      <form>
        <col name="Name"/>
        <col name="SectorDescr" groupOrder="0"/>
        <col name="IndDescr" groupOrder="1"/>
      </form>
    </Calculate_Request_1>
  </Body>
</Envelope>

```

XML Sample Response - Grouping Response

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2009/10/01/webservices/
    rkd/Screener_1/Verify_1_Reply</Action>
  </Header>

```



```

<RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
</Header>
<Body>
  <Calculate_Response_1 xmlns="http://www.reuters.com/ns/2009/10/01/webservices/rkd/Screener_1">
    <rs all="25" row="1" rows="25">
      <h>
        <c name="Name" type="string" />
      </h>
      ...
      <g all="11" n="SECTORDESCR" row="1" rows="11">
        <g all="1" n="INDDDESCR" row="1" rows="1">
          <r>
            <v>National Western Life Insurance Company</v>
          </r>
          <s name="IndDescr" type="string" rtd="group">
            <v>Insurance (Life)</v>
          </s>
        </g>
        <g all="3" n="INDDDESCR" row="1" rows="3">
          <r>
            <v>First Citizens Bancorporation, Inc</v>
          </r>
          <r>
            <v>Farmers & Merchant Banc.</v>
          </r>
          <r>
            <v>First National Bank Alaska</v>
          </r>
          <s name="IndDescr" type="string" rtd="group">
            <v>Regional Banks</v>
          </s>
        </g>
        ...
        <s name="SectorDescr" type="string" rtd="group">
          <v>Financial</v>
        </s>
      </g>
      ...
    </rs>
  </Calculate_Response_1>
</Body>
</Envelope>

```

41.11.7.1 Position Grouping

groupRow and groupRows, attributes of the pos element, enable selection of a group's rows. The functionality of these attributes is similar to that of the attributes row and rows. However, these attributes are functional only for the last nested group.

41.11.8 Single Value Columns

The Screener allows the user to calculate single values. This single value can be calculated for a list of companies or for a specified group.

The example request and response below provide the average share price of all active companies having a share price greater than \$ 500, registered on the stock exchanges in the USA.

XML Sample Request - Single Value Column Request

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Screener/Screener.svc/Anonymous</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/10/01/webservices/rkd/Screener_1/Calculate_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
    </Authorization>
  </Header>
  <Body>
    ...
  </Body>
</Envelope>

```



```

    <Token>[service token]</Token>
  </Authorization>
</Header>
<Body>
  <Calculate_Request_1 xmlns="http://www.reuters.com/ns/2009/10/01/webservices/rkd/Screeners_1">
    <criteria content="ctNone">{Active} AND {ExchangeCountryCode}='USA'</criteria>
    <criteria>{Price}>500</criteria>
    <form>
      <col name="Name"/>
      <col name="AvgPrice" rtd="Some text">
        <expression>AVG({Price})</expression>
      </col>
    </form>
  </Calculate_Request_1>
</Body>
</Envelope>

```

XML Sample Response - Single Value Column Response

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2009/10/01/webservices/rkd/Screeners_1/Calculate_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <Calculate_Response_1 xmlns="http://www.reuters.com/ns/2009/10/01/webservices/rkd/Screeners_1">
      <rs all="12" row="1" rows="12">
        <h>
          <c name="Name" type="string" />
        </h>
        <r>
          <v>NVR, Inc.</v>
        </r>
        <r>
          <v>First Citizens Bancorporation, Inc</v>
        </r>
        ...
        <r>
          <v>First National Bank Alaska</v>
        </r>
        <s name="AVGPRICE" type="number" rtd="Some text">
          <v>10147</v>
        </s>
      </rs>
    </Calculate_Response_1>
  </Body>
</Envelope>

```

The example below shows a request and response that provide the minimum share price of all active companies having a share price greater than \$ 300, registered on the stock exchanges in the USA, grouped under respective industry sectors.

XML Sample 2 - Single Value Column Request

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Screeners/Screeners.svc/Anonymous</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/10/01/webservices/rkd/Screeners_1/Calculate_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <Calculate_Request_1 xmlns="http://www.reuters.com/ns/2009/10/01/webservices/rkd/Screeners_1">
      <criteria content="ctNone">{Active} AND {ExchangeCountryCode}='USA'</criteria>

```



```

    <criteria>{Price}>300</criteria>
  </form>
  <col name="Name"/>
  <col name="SectorDescr" groupOrder="0"/>
  <col name="MinPrice" groupRef="SectorDescr" rtd="Price">
    <expression>MIN({Price})</expression>
  </col>
</form>
</Calculate_Request_1>
</Body>
</Envelope>

```

XML Sample 2 - Single Value Column Response

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2009/10/01/webservices/
rkd/Screener_1/Calculate_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <Calculate_Response_1 xmlns="http://www.reuters.com/ns/2009/10/01/webservices/rkd/Screener_1">
      <rs all="18" row="1" rows="18">
        <h>
          <c name="Name" type="string" />
        </h>
        ...
        <g all="9" n="SECTORDESCR" row="1" rows="9">
          <r>
            <v>First Citizens Bancorporation, Inc</v>
          </r>
          <r>
            <v>Farmers & Merchant Banc.</v>
          </r>
          ...
          <r>
            <v>First National Bank Alaska</v>
          </r>
          <s name="SectorDescr" type="string" rtd="group">
            <v>Financial</v>
          </s>
          <s name="MINPRICE" type="number" rtd="Price">
            <v>327</v>
          </s>
        </g>
        ...
      </rs>
    </Calculate_Response_1>
  </Body>
</Envelope>

```

41.11.9 Custom Columns

The columns may have custom expression. See the example below:

XML Sample Request - Custom Columns Request

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Screener/Screener.svc/Anonymous</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/10/01/webservices/rkd/Screener_1/
Calculate_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    ...
  </Body>
</Envelope>

```



```

</Header>
<Body>
  <Calculate_Request_1 xmlns="http://www.reuters.com/ns/2009/10/01/webservices/rkd/Screener_1">
    <criteria content="ctNone">{Active} AND {ExchangeCountryCode}='USA'</criteria>
    <criteria>{Price}>500</criteria>
    <form>
      <col name="Name"/>
      <col name="HalfPrice">
        <expression>AVG({Price})/2</expression>
      </col>
    </form>
  </Calculate_Request_1>
</Body>
</Envelope>

```

41.11.1(Defining Scope of Request

The attribute scope allows the Screener a selection between a sample of the whole result or a sample of the response companies.

For example, take the case where the criteria for a request returns 1000 rows, but the response is limited to five rows using the element pos. In this case the Screener allows the use of either the initial 1000 companies or the response's five companies. To use the initial 1000 companies, the scope should be specified as scWhole; to use only five response companies, the scope should be specified as scRows.

The default specification is scWhole, and will be used if scope is not present in request.

The example below shows a request and response that provides the average price for all active companies having a share price greater than \$ 300, registered on the stock exchanges in the USA. It also shows the average price for the first two companies per group, among all companies having a share price greater than \$ 300, registered on the stock exchanges in the USA grouped under respective industry sectors.

XML Sample Request - Average Price for the First Two Companies per Group

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Screener/Screener.svc/Anonymous</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/10/01/webservices/rkd/Screener_1/Calculate_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <Calculate_Request_1 xmlns="http://www.reuters.com/ns/2009/10/01/webservices/rkd/Screener_1">
      <criteria content="ctNone">{Active} AND {ExchangeCountryCode}='USA'</criteria>
      <criteria>{Price}>300</criteria>
      <form>
        <col name="Name"/>
        <col name="SectorDescr" groupOrder="0"/>
        <col name="AvgPrice1" groupRef="SectorDescr" rtd="Price" scope="scWhole">
          <expression>AVG({Price})</expression>
        </col>
        <col name="AvgPrice2" groupRef="SectorDescr" rtd="Price" scope="scRows">
          <expression>AVG({Price})</expression>
        </col>
        <pos groupRows="2"/>
      </form>
    </Calculate_Request_1>
  </Body>
</Envelope>

```

XML Sample Response - Average Price for the First Two Companies per Group




```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2009/10/01/webservices/
rkd/Screener_1/Calculate_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <Calculate_Response_1 xmlns="http://www.reuters.com/ns/2009/10/01/webservices/rkd/Screener_1">
      <rs all="18" row="1" rows="11">
        <h>
          <c name="Name" type="string" />
        </h>
        ...
        <g all="9" n="SECTORDESCR" row="1" rows="2">
          <r>
            <v>First Citizens Bancorporation, Inc</v>
          </r>
          <r>
            <v>Farmers & Merchant Banc.</v>
          </r>
          <s name="SectorDescr" type="string" rtd="group">
            <v>Financial</v>
          </s>
          <s name="AVGPRICE1" type="number" rtd="Price">
            <v>10576</v>
          </s>
          <s name="AVGPRICE2" type="number" rtd="Price">
            <v>583</v>
          </s>
        </g>
        ...
      </rs>
    </Calculate_Response_1>
  </Body>
</Envelope>

```

41.12 Application Logic

The logic of the Screener service can be explained by the following:

1. Step 1 (with GetVariable_1):

End user perspective: the user specifies screening criteria and submits the request:

- i. Variables list is shown on the page, it is possible to select variable and see its description or go to the help page and find detailed description for the variables;
- ii. The user enters calculation criteria by selecting required variables and setting necessary conditions to these variables;
- iii. The user enters output variables (and statistics for them) that will become columns in the resulting table;

Application perspective:

- i. The application tries to get Screener variables for the particular service user in application cache. If attempt fails then the application gets Screener variables for the particular service user through TRKD and stores the response in the cache for 1 day. So, there is no need to execute the GetVariable_1 request during the day for this particular service user again.

The variables in the response contain the following attributes:

- **Type (vType)** - the end user should know the type of variables he/she operates. If the type is "enum", then the end user should be able to select particular value(s) from the enum for calculating criteria;
 - **Description (vDesc)** - the end user is shown description for every variable he wants;
 - **Precision (vPrec)** - the end user should know the precision of floating point variables; to be shown in mini-help;
 - **Long description (vBody)** - if the end user does not understand the meaning of the variable from the information in <vDesc>, he/she can find detailed description in application help pages;
 - **Enum values (vEnum)** - if a variable is of enum type, then the end user will be able to select particular enum value(s);
- ii. The application builds a page for the end user using the variables list and other data entered as the screening criteria;



2. Step 2 (with Verify_1 and Calculate_1):

End user perspective: the application displays a table with the screening calculation result where names of table columns are short descriptions of variable and floating point values have the same precision as shown in mini-help for the corresponding variables. If the specified criteria were incorrect, then the corresponding error message is shown.

Application perspective:

- i. The application sends "Verify_1" request and if errors count is not zero, it builds an error page for the user;
- ii. If no errors occurred during request verification, then the "Calculate_1" request is executed with the following values in "fields" parameter:
 - Proposed column title (cHead) - the titles proposed by TRKD and can be used when displaying table with results;
 - Precision (cPrec) - to show the end user the actual precision of variable values (f.e.: TRKD returns 3.5 while precision is 3, so the end user may see 3.500).

(main idea of the opus above is caching variables description on clients' side)

"Value type" description (t="..." attribute in response):

"Value type" attribute can be equal to one of three values:

- "r" - default value, means that value type corresponds to the column type (**R**eference)
- "a" - value type is NA (Not **A**vailable)
- "m" - value type is NM (No **M**atch)

A request that returns "Value type" attribute is shown below:

XML Sample Request

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/Screener/Screener.svc/Anonymous</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/10/01/webservices/rkd/Screener_1/Calculate_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <Calculate_Request_1 xmlns="http://www.reuters.com/ns/2009/10/01/webservices/rkd/Screener_1">
      <criteria>{Price}&gt;20</criteria>
      <form>
        <col name="Name"/>
        <col name="#HoldRec_C"/>
        <col name="#BuyRec_C"/>
        <pos rows="2"/>
      </form>
    </Calculate_Request_1>
  </Body>
</Envelope>
```

The response returns the following information:

XML Sample Response

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2009/10/01/webservices/rkd/Screener_1/Calculate_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <Calculate_Response_1 xmlns="http://www.reuters.com/ns/2009/10/01/webservices/rkd/Screener_1">
      <rs row="1" rows="20" all="21034">
        <h>
          <c name="Name" type="string"/>
        </h>
      </rs>
    </Calculate_Response_1>
  </Body>
</Envelope>
```



```
<c name="#HoldRec_C" type="number"/>
<c name="#BuyRec_C" type="number"/>
</h>
<r>
  <v>CASIO COMPUTER CO LTD</v>
  <v>4</v> // actual value, default value t='r' is not returned
  <v>1</v>
</r>
<r>
  <v>NIPPON MINING HOLDINGS, INC.</v>
  <v t="a"/> // t="a" means that the value is not available for the company
  <v t="a"/>
</r>
</rs>
</Calculate_Response_1>
</Body>
</Envelope>
```



chapter 42 Significant Developments

Thomson Reuters Significant Developments is a news analysis and filtering service that identifies crucial, market-moving company news on a near real-time basis for a large universe of public companies. You can use Significant Developments to screen through company press releases and briefly summarize major company specific developments. The targeted coverage is 30,000+ publicly traded companies in 80 countries.

Thomson Reuters Significant Developments allows users to keep abreast of the market without screening through high volumes of press releases. This service allows for customized reports on companies and/or areas of interest (e.g. M&A activity in a particular industry). The data, including history, is made available in a highly searchable format allowing users to analyze trends and patterns for a company, industry or subject matter.

Thomson Reuters analysts monitor thousands of press releases daily, identifying those developments that are significant to a company's current or future operations. Each story, complete with a date, time and headline, is tagged according to subject and is assigned a significance level. There are 27 possible subject topics and three levels of significance (1 = high, 2 = medium, 3 = low).

The Thomson Reuters significant development database is created by trained analysts on a real time basis who continuously monitor various news sources (Business Wire, Wall Street Journal, for example) for significant developments that are viewed as soon as they become available to public. The analysts create abstracts and tag them by subject and importance.

42.1 Authentication/Authorization, Service Endpoint, and Required Headers

Authorization

All requests to the Significant Developments web service require an authorization token. For details, see section Understanding Authentication Tokens.

Authentication

Significant Developments uses Reuters impersonation tokens for each effective user. In this case, Thomson Reuters must create each user before your application authenticates them. Unmanaged effective users are not supported in Significant Developments.

For additional information, see section Creating a Token.

Service Endpoint

Significant Developments Endpoint

`http://api.rkd.reuters.com/api/SignificantDevelopments/SignificantDevelopments.svc`

Required Header

Required HTTP Headers

POST api/SignificantDevelopments/SignificantDevelopments.svc HTTP/1.1
Content-Type: application/soap+xml
Host: api.rkd.reuters.com
Content-Length: [length]

42.2 WSDL

WSDL:

`http://api.rkd.reuters.com/schemas/SignificantDevelopments/wsd/SignificantDevelopments_1_HttpAndRKDToken.wsdl`



42.3 Significant Developments Requests

You can specify a number of criteria to filter significant developments, including:

- Company
- Development ID
- Front page stories
- Period
- Significance
- Number of Developments
- Topic Code

Thomson Reuters Significant Developments currently provides a single request named GetSignificantDevelopments_Request_1 which allows three ways to search. These three types of search are:

- **FindRequest:** Allows the user to search by RIC codes, country and sector, start and end dates, specific significance levels, topic codes etc.
- **FindByIdRequest:** Allows the user to retrieve a specific news story by searching on the development id.
- **FindRequestByFrontPage:** Allows the user to retrieve current days news stories based on whether they are on the front page or not.

Note: Thomson Reuters recommends setting MaxNumberOfItems="100" for all requests to speed up the search and to avoid time out errors in cases when companies have accumulated an extremely large amount of stories that are not relevant to the search. Even though <MaxNumgberOfItems> is an optional attribute, Thomson Reuters recommends including <MaxNumberOfItems> in **each** significant developments request.

XML Sample Request - Significant Developments Find Request

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/SignificantDevelopments/SignificantDevelopments.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/SignificantDevelopments_1/GetSignificantDevelopments_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetSignificantDevelopments_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/SignificantDevelopments_1">
      <FindRequest
        StartDate="<Start Date (Optional)>"
        EndDate="<End Date (Optional)>"
        Significance="<Significance Level (Optional)>"
        Topics="<Topic List (Optional)>"
        FrontPage="<Front Page Flag (Optional)>"
        MaxNumberOfItems="<Maximum number of items (Optional)>"
        <CompanyIdentifiers>
          <RIC Value="<RIC Code>" />
        </CompanyIdentifiers>
      </FindRequest>
    </GetSignificantDevelopments_Request_1>
  </Body>
</Envelope>
```

Attribute	Description
StartDate	The starting date where Thomson Reuters Significant Developments should begin searching for news stories.



EndDate	The end date where Thomson Reuters Significant Developments should end searching for news stories.
Significance	There are currently 3 flags used to disclose the level of significance: • 1 = High • 2 = Medium • 3 = Low
Topics	There are total of 22 topics available for Thomson Reuters Significant Development stories. Each development can include up to 3 topic codes depending on the nature of development story. There will always be a minimum of one topic code will be assigned to each development. For further information on Topic codes and their descriptions please refer to section Topics and Descriptions.
FrontPage	Indicates if response should only contain stories that are "Front Page".
MaxNumberOfItems	Sets the number of news stories returned in the response. Note: Thomson Reuters recommends setting MaxNumberOfItems="100" for all requests to speed up the search and to avoid time out errors in cases when companies have accumulated an extremely large amount of stories that are not relevant to the search. Even though <MaxNumberOfItems> is an optional attribute, Thomson Reuters recommends including <MaxNumberOfItems> in each significant developments request.

FindByIDRequest Example

XML Sample Request - Significant Developments Find Request

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/SignificantDevelopments/SignificantDevelopments.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/SignificantDevelopments_1/GetSignificantDevelopments_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetSignificantDevelopments_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/SignificantDevelopments_1">
      <FindByIDRequest>
        <Development>"<DevelopmentID>"</Development>
      </FindByIDRequest>
    </GetSignificantDevelopments_Request_1>
  </Body>
</Envelope>
```

Attribute	Description
DevelopmentID	Development Id of a news story.

FindRequestByFrontPage

XML Sample Request - Significant Developments Find Request

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/SignificantDevelopments/SignificantDevelopments.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/SignificantDevelopments_1/GetSignificantDevelopments_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
```



```
<GetSignificantDevelopments_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/SignificantDevelopments_1">
  <FindRequestByFrontPage FrontPage="<Front Page Flag>" MaxNumberOfItems="<Maximum number of items>" />
</GetSignificantDevelopments_Request_1>

</Body>
</Envelope>
```

Attribute	Description
FrontPage	Indicates if response should only contain stories that are "Front Page" or the ones that are not. The default value is "Yes".
MaxNumberOfItems	Sets the number of news stories returned in the response. Note: Thomson Reuters recommends setting MaxNumberOfItems="100" for all requests to speed up the search and to avoid time out errors in cases when companies have accumulated an extremely large amount of stories that are not relevant to the search. Even though <MaxNumberOfItems> is an optional attribute, Thomson Reuters recommends including <MaxNumberOfItems> in each significant developments request.

42.3.1 XSD

XSD

XSD: http://api.rkd.reuters.com/schemas/SignificantDevelopments/SignificantDevelopments_1.xsd

42.3.2 Company Requests

Use a RIC symbol to get Significant Development stories about a company.

XML Sample Request - Significant Developments Company Request

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/SignificantDevelopments/SignificantDevelopments.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/SignificantDevelopments_1/GetSignificantDevelopments_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetSignificantDevelopments_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/SignificantDevelopments_1">
      <FindRequest Significance="1 2 3" MaxNumberOfItems="10">
        <CompanyIdentifiers>
          <RIC Value="msft.o" />
        </CompanyIdentifiers>
      </FindRequest>
    </GetSignificantDevelopments_Request_1>
  </Body>
</Envelope>
```

You can also make a single request for many companies by simply repeating the company identifier element for each company you want.

42.3.3 Multiple Company Request

The following example requests information on three companies (Vodafone, IBM and Microsoft) within a single request.

XML Sample Request -



```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/SignificantDevelopments/SignificantDevelopments.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/SignificantDevelopments_1/GetSignificantDevelopments_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetSignificantDevelopments_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/SignificantDevelopments_1">
      <FindRequest Significance="1 2 3" MaxNumberOfItems="10">
        <CompanyIdentifiers>
          <RIC Value="vod.l" />
          <RIC Value="ibm.n" />
          <RIC Value="msft.o" />
        </CompanyIdentifiers>
      </FindRequest>
    </GetSignificantDevelopments_Request_1>
  </Body>
</Envelope>

```

42.3.4 Period Specific Requests

Use StartDate and EndDate (GMT) to specify the period for the significant development request.

XML Sample Request - Significant Developments Period Specific Request

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/SignificantDevelopments/SignificantDevelopments.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/SignificantDevelopments_1/GetSignificantDevelopments_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetSignificantDevelopments_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/SignificantDevelopments_1">
      <FindRequest Significance="1 2 3" MaxNumberOfItems="10" StartDate="2006-10-20T00:00:00" EndDate="2006-10-25T00:00:00">
        <CompanyIdentifiers>
          <RIC Value="vod.l" />
        </CompanyIdentifiers>
      </FindRequest>
    </GetSignificantDevelopments_Request_1>
  </Body>
</Envelope>

```

Note: Thomson Reuters began collecting significant development stories in January 1999.

42.3.5 Significance Level Requests

The level of significance is assigned by our analyst team, after determining the priority of the given development for a given company.

Use the "significance" attribute to limit the significant developments to a particular significance level (1, 2, 3). Use a space



separated list to specify multiple levels. If you do not specify a significance level, the significant developments service returns all three levels.

XML Sample Request - Significant Developments with Significance Level

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/SignificantDevelopments/SignificantDevelopments.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/SignificantDevelopments_1/GetSignificantDevelopments_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetSignificantDevelopments_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/SignificantDevelopments_1">
      <FindRequest Significance="1 2" MaxNumberOfItems="10">
        <CompanyIdentifiers>
          <RIC Value="vod.l" />
        </CompanyIdentifiers>
      </FindRequest>
    </GetSignificantDevelopments_Request_1>
  </Body>
</Envelope>
```

42.3.6 Specifying the Number of Developments

Use the "MaxNumberOfItems" attribute to specify the number of significant developments to return. The default value is 100.

Note: Thomson Reuters recommends setting MaxNumberOfItems="100" for all requests to speed up the search and to avoid time out errors in cases when companies have accumulated an extremely large amount of stories that are not relevant to the search. Even though <MaxNumberOfItems> is an optional attribute, Thomson Reuters recommends including <MaxNumberOfItems> in **each** significant developments request.

XML Sample Request - Significant Developments Specifying the Number of Developments

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/SignificantDevelopments/SignificantDevelopments.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/SignificantDevelopments_1/GetSignificantDevelopments_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetSignificantDevelopments_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/SignificantDevelopments_1">
      <FindRequest Significance="1 2 3" MaxNumberOfItems="10">
        <CompanyIdentifiers>
          <RIC Value="vod.l" />
        </CompanyIdentifiers>
      </FindRequest>
    </GetSignificantDevelopments_Request_1>
  </Body>
</Envelope>
```



42.3.7 Topic Code Requests

There are a total of 40 topics. Each development can include up to three topic codes depending on the nature of the development. There is always a minimum of one topic code assigned to each development. For a list of codes and their descriptions, see section Topics and Descriptions.

Use the "Topics" attribute to get Significant Developments about a particular topic. Use a space separated list for multiple topics. For additional information about topics and topic codes, see section Topics and Descriptions.

XML Sample Request - Significant Developments Requests By Topic Code

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/SignificantDevelopments/SignificantDevelopments.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/SignificantDevelopments_1/GetSignificantDevelopments_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetSignificantDevelopments_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/SignificantDevelopments_1">
      <FindRequest Significance="1 2" MaxNumberOfItems="10" Topics="201 204">
        <CompanyIdentifiers>
          <RIC Value="msft.o" />
        </CompanyIdentifiers>
      </FindRequest>
    </GetSignificantDevelopments_Request_1>
  </Body>
</Envelope>
```

42.3.8 Front Page Requests

Thomson Reuters uses the Front Page designation to highlight the most important stories of the day and/or a specific time of the day. On most days, there should be at least four Front Page stories before and after the bell, totaling eight to ten top stories a day. In addition, Thomson Reuters monitors the standard press release sources for top significant developments, and checks other real time websites (for example, Yahoo! Finance, Reuters Front Page, Wall Street Journal Front Page, CBS MarketWatch, TheStreet.com) for potential Front Page news.

Use the "FrontPage" attribute to limit the developments to front page stories only.

Note: Thomson Reuters recommends setting MaxNumberOfItems="100" for all requests to speed up the search and to avoid time out errors in cases when companies have accumulated an extremely large amount of stories that are not relevant to the search. Even though <MaxNumberOfItems> is an optional attribute, Thomson Reuters recommends including <MaxNumberOfItems> in **each** significant developments request.

XML Sample Request - Significant Developments Request with Front page stories

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/SignificantDevelopments/SignificantDevelopments.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/SignificantDevelopments_1/GetSignificantDevelopments_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
```



```
<Body>
  <GetSignificantDevelopments_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/SignificantDevelopments_1">
    <FindRequest MaxNumberOfItems="10" FrontPage="true">
      </GetSignificantDevelopments_Request_1>
    </Body>
  </Envelope>
```

42.3.9 Development ID Requests

Thomson Reuters uses a Development ID to uniquely identify each development in the database. Thomson Reuters generates and maintains these numbers. Development IDs do not change over time and are never re-used.

If you know a specific development ID, use that ID to get the development.

XML Sample Request - Significant Developments Request by DeveloperID

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/SignificantDevelopments/SignificantDevelopments.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/SignificantDevelopments_1/GetSignificantDevelopments_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetSignificantDevelopments_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/SignificantDevelopments_1">
      <FindByIdRequest>
        <Development>753248</Development>
      </FindByIdRequest>
    </GetSignificantDevelopments_Request_1>
  </Body>
</Envelope>
```

42.4 Understanding the Significant Development Response

The significant developments web service response contains the developments you request, as well as the related metadata.

XML Sample Response - Significant Developments

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/rkd/SignificantDevelopments_1/GetSignificantDevelopments_1_Reply</a:Action>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetSignificantDevelopments_Response_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/SignificantDevelopments_1">
      <FindResponse>
        <Development>
          <Xrefs>
            <RepNo>57840</RepNo>
            <DevelopmentId>1297864</DevelopmentId>
            <Name>Microsoft Corporation</Name>
            <Ticker>MSFT</Ticker>
            <RIC>MSFT.OQ</RIC>
          </Xrefs>
        </Development>
      </FindResponse>
    </GetSignificantDevelopments_Response_1>
  </s:Body>
</s:Envelope>
```



```

    <Country>USA</Country>
  </Xrefs>
  <Dates>
    <Source>2008-04-25T13:00:00</Source>
    <Initiation>2008-04-25T13:06:51.597</Initiation>
    <LastUpdate>2008-04-25T13:06:51.66</LastUpdate>
  </Dates>
  <Flags>
    <FrontPage>>false</FrontPage>
    <Significance>3</Significance>
  </Flags>
  <Topics>
    <Topic1 Code="207">Acquisitions</Topic1>
  </Topics>
  <Headline>Microsoft Corp. Completes Tender Offer For Fast Search & Transfer ASA</Headline>
  <Description>Microsoft Corp. announced that it has completed settlement of its tender offer for Fast Search & Transfer ASA, a
    provider of enterprise search solutions. Microsoft's plans to acquire FAST were originally announced January 8, 2008. FAST will
    operate as a Microsoft subsidiary, with a dedicated enterprise search research and development center in Oslo, Norway, and offices
    throughout the world. </Description>
  </Development>
</FindResponse>
</GetSignificantDevelopments_Response_1>
</Body>
</Envelope>

```

The XREFS Section

Data Type	Description
RepNo	A RepNo (Reuters Report Number) uniquely identifies each issuer (company) covered by Thomson Reuters. Thomson Reuters generates and maintains these numbers. RepNos do not change over time and are never re-used.
Development ID	Thomson Reuters uses a Development ID to uniquely identify each development in the database. Thomson Reuters generates and maintains these numbers. Development IDs do not change over time and are never re-used.
Name	Company name.
Ticker	Ticker Id.
RIC	RIC ID assigned to the company.
Country	Country the headquarters of the company is located in.

Development Dates

There are three dates associated with each development: source, initiation and lastupdate. Each date is displayed in GMT.

Data Type	Description
Source Date	Indicates the actual date when the development story was published.
Initiation Date	Indicates the date and time when the development news story was created into our collection database for the first time by our analyst staff.
LastUpdate Date	Indicates the date and time when Thomson Reuters last updated the development news. If the initiation and lastupdate dates are the same, then there is no update for the given development after the first time it was entered.

XML Sample

```

<Dates>
  <Source>2006-08-23T23:00:00.0000000-04:00</Source>
  <Initiation>2006-08-24T04:17:25.3730000-04:00</Initiation>
  <LastUpdate>2006-08-24T07:06:56.3700000-04:00</LastUpdate>
</Dates>

```



The Front Page and Significance Flags

Thomson Reuters associates two flags with each development: front page and significance.

Data Type	Description
Front Page	Indicates if a given development is coming from a front page story or not. There are true or false flags used to indicate the nature of this data point.
Significance	Indicates the level of importance (1=High, 2=Medium, 3=Low) for the development.

The level of significance is assigned by our analyst team, after determining the priority of the given development for a given company. Please, note that there is a list of guidelines used to determine the significance level. For example, large companies do not need every small contract identified. In some cases a development is critical towards one particular company's business, but for other companies, that same development is of very little importance. A sale agreement between IBM and a small market cap firm, as a news story, can be identified as a low level development for IBM, while it can be tagged as a high level development for the small market cap company.

Thomson Reuters uses the Front Page designation to highlight the most important stories of the day and/or a specific time of the day. On most days, there should be at least four Front Page stories before and after the bell totaling eight to ten top stories a day. In addition, Thomson Reuters monitors the standard press release sources for top significant developments, and checks other real time web sites (for example, Yahoo! Finance, Reuters Front Page, Wall Street Journal Front Page, CBS MarketWatch, TheStreet.com) for potential Front Page news.

XML Sample

```
<Flags>
  <FrontPage>false</FrontPage>
  <Significance>1</Significance>
</Flags>
```

Topics and Topic Codes

There are a total of 40 topics. Each development can include up to three topic codes depending on the nature of the development. There is always a minimum of one topic code assigned to each development. For a list of codes and their descriptions, see section Topics and Descriptions.

XML Sample

```
<Topics>
  <Topic1 Code="253">Strategic Combinations</Topic1>
  <Topic2 />
  <Topic3 />
</Topics>
```

Headline

The headline usually includes relevant information such as the company name and issue topic. To create a useful headline, the analyst may shorten or otherwise form the headline to indicate the summary of the development.

XML Sample

```
<Headline>Mittal Steel Company N.V. And Nippon Steel To Lift Output At US JV-Reuter</Headline>
```

Description

The description section contains the significant development story.

XML Sample

```
<Description>Mattel, Inc. announced that it has entered a multi-year worldwide licensing agreement with Screenlife LLC to manufacture, distribute and market the first DVD-based board game Scene It?. The licensing agreement also gives Mattel exclusive rights to the Scene It? Brand across a broad spectrum of toy categories including traditional, electronic and interactive games.</Description>
```



42.5 Handling Dual-listed Companies

While Thomson Reuters collects information about multiple issues per company (that is, shares outstanding, DPS for various classes of share etc.), these multiple classes of shares do not add to the total company count. An exception to this rule occurs when one company reports financials using two different accounting standards. This could happen, for example, for a non-US company with American Depositary Receipts (ADRs) trading in the US and a local issue trading in its home exchange. If these two instruments are associated with financials using different accounting standards, then the Thomson Reuters Fundamental database contains two companies – one to represent each of the above examples. A similar dual listing (with different accounting standards) could occur with other pairs of countries, such as UK/Australia etc. Currently there are about 1,000 companies in the database that are dual listed in this manner. You can obtain a list of all such companies upon request. Use the country of exchange for each company to determine the origin of each version of the company.

42.6 Topics and Descriptions

Thomson Reuters Analysts categorize Significant Development stories using the following Topics. Thomson Reuters assigns up to three topics to each story.

Description	Explanation
Positive Earnings Pre-Announcement	Pre-announcement (Guidance) provided by company when it expects to exceed (and by how much) estimates published by analysts or company themselves. Includes revised estimates, current consensus estimates, and reason for revision.
Negative Earnings Pre-Announcement	Pre-announcement (Guidance) provided by company when it expects to fall below (and by how much) estimates published by analysts or company themselves. Includes revised estimates, current consensus estimates, and reason for revision.
Other Pre-Announcement	Pre-announcement (Guidance) provided by company when it expects to meet estimates published by analysts or company themselves. May also incorporate general business outlook or specific guidance when no published estimates are available. Includes revised estimates and current consensus estimates.
Initial Public Offerings	All new issuances of stock for the first time publicly on a stock exchange.
Equity Financing /Related	Includes the issuance of Common or Preferred Stock as a means of raising capital (secondary offerings, private placements, etc).
Debt Financing	Encompasses the issuance of new debt instruments as well as financial restructurings.
Mergers / Acquisitions	Includes name of company and brief business summary, specific terms of the deal, expected completion date and type of accounting treatment used. Does not include whether or not deal is accretive to earnings, is subject to regulatory factors or board/ shareholder approval and subsequent new management structure.
Equity Investments	Any purchase/sale of a company's equity by another company, individual or group of investors when interest represents less than 50% of company.
Divestitures / Spin-offs	Disposal or sale of product line, segment or division.
Share Repurchase	Company's repurchase of common stock on the open market.
Indices Changes	Includes DJIA, S&P 500, NASDAQ 100 Does not include other indices such as S&P MidCap 400, S&P SmallCap 600, Russell 2000.
Litigation / Regulatory/ Related	Includes lawsuits for a significant amount of money or resulting in discontinuation of a product, division or segment. Also includes Justice Department inquiries, state inquiries, criminal investigations and SEC investigations. Does not include class action security lawsuits or lawsuits of immaterial value.
Accounting Issues	Includes inquiries regarding companies accounting practices, earnings restatements, delayed filings, and auditor's comments.
Bankruptcy / Related	Companies filing for, or emerging from, Chapter 11 Bankruptcy protection.
Restructuring /Reorganization	All reorganizations and organizational restructurings and cost of restructuring, where available. Includes workforce reductions, facility closures and consolidation of business segments/divisions.
Joint Ventures /Strategic Alliances / Business Deals	Includes joint ventures, collaborations or alliances involving multiple companies and the licensing of one company's product to another. Separate stories will be written up for each company involved.
Expansion / New Markets / New Units	Includes geographical expansion, the creation of new operating segments/units and entrance into new markets.



Products	Includes new products and enhancements to existing products with specified improvements. Not Included: Enhancements/beta versions of existing products.
Officer Changes	Changes to Chairman, CEO, President or CFO only.
Exchange Changes	Changes in exchange (NYSE, Nasdaq, Amex, OTC Bulletin Board).
Name Changes	Name changes as confirmed by an exchange.
Special Events	Includes all other developments that do not fall into any of the above categories or developments added based upon stock volatility (unless +/- movement in excess of 15%). This includes positive or weak earnings reports, analyst up/down grades, significant dividend cuts, and political news.

Topic Code	Topic
201	Products
202	Production Guidance
204	Joint Ventures / Strategic Alliances / Business Deals
207	Mergers / Acquisitions
210	Officer Changes
213	Divestitures
214	Spin-offs
216	New Business / Unit / Subsidiary
217	New Market
219	Equity Investments
222	Share Repurchases
225	Restructuring / General Reorganization
226	Layoffs
227	Labour Issues
228	Bankruptcy / Related
231	Initial Public Offerings
232	Equity Financing / Related
233	Debt Financing / Related
234	Indices Changes
237	Exchange Changes
240	Name Changes
242	Accounting Issues
243	Corporate Litigation
244	Class Action Lawsuit
245	Earnings Announcements
246	Negative Earnings Pre-Announcement
249	Positive Earnings Pre-Announcement
252	Other Earnings Pre-Announcement
253	Strategic Combinations
254	Regulatory / Company Investigation
255	No Significant Developments Reported
256	Dividends
257	Debt Ratings
258	Special Events / Other
259	Restatements
260	Delinquent Filings
261	Change in Accounting Method / Policy
281	Too long Significant Development
282	Too long Comments



283	Too short Significant Development



chapter 43 Snapshot Content Retrieval

The Snapshot Content Retrieval service provides sell side research documents from a subset of the full Thomson Reuters Aftermarket Research collection. The data comprises of sell side analyst research sourced from both major global firms and regional and boutique firms. The databases contain over 9 million reports, from 1000 contributors, and cover more than 60,000 companies.

This chapter explains how to download the latest Research Snapshot documents.

43.1 Authentication and Authorization

Authorization

All requests to the TRKD API require an authorization token. For details, see section Understanding Authentication Tokens.

Authentication

TRKD API uses Reuters impersonation tokens for each effective user. In this case, Thomson Reuters must create each user before your application authenticates them. Unmanaged effective users are not supported in .

See section Creating a Token and Generating the User Authorization Token for more information.

43.2 Retrieving Documents

This section explains and shows an example of how you can download a document that was made available to you on your snapshot feed.

The Snapshot Document Retrieval service is used to retrieve documents by Document ID or Contributor ID and Contributor Document ID. The service checks the authenticated user's credentials and delivers documents the user is entitled to. The service supports all file types in the document repository including multimedia files.

The service also allows you to retrieve document thumbnails to determine a document's contents: whether it is a text or a chart.

Basically, you need to specify only documentID and file type in HTTP request:

Http Sample Request

```
http://docs.rkd.reuters.com/api/SnapshotContentRetrieval/SnapshotContentRetrieval.svc/docs/[docID]/DocumentType
Cookie: RkdAppId= [AppID]; RkdToken=[RkdToken]
```

Attribute	Description
DocumentType	Defines the document type to be retrieved by the request. Please, provide DocumentType with the value of "fileType" attribute contained in the DocSearch response. For example, use "DocumentType = syn" to retrieve document synopsis. The possible values are: • activeDoc - use this value to retrieve documents of the following types: doc, xsl, etc; • pdf - use this value to get documents in pdf format; • syn - apply this value to retrieve document synopsis; • url - use this value to redirect to the specified url; • web - use this value to get html documents with links to other html pages, images, stylesheets, etc; • other - specify other document type you want to retrieve (txt, etc).



pages	Defines either page numbers or page ranges, for example: • pages=2 • pages=1-5;7,9 Note: Document pages start from 0.
refNo	(Optional) Specifies a reference information to the purchase record. If you specify it by document retrieval, this referenceCode will be recorded in the purchase record. If you then send a GetPurchaseHistory_1 request, you'll see the purchase record of the downloaded document with the referenceCode you've specified.

The following example will retrieve a PDF document with the specified documentID:

Http Sample Request - Retrieving PDF Document

```
http://api.rkd.reuters.com/api/SnapshotContentRetrieval/SnapshotContentRetrieval.svc/docs/47259678/pdf
Cookie: RkdAppId= [AppID]; RkdToken=[RkdToken]
```

The API will return the following HTTP response:

Http Sample Response - Retrieving PDF Document

```
HTTP/1.1 200 OK
Content-Disposition: inline; filename=47259678.pdf
Content-Type: application/pdf
Content-Length: 322252
Cache-Control: public, must-revalidate, max-age=0
Expires: Tue, 17 May 2011 12:03:06 GMT
Last-Modified: Tue, 17 May 2011 12:03:06 GMT
Server: Microsoft-IIS/7.5
X-AspNet-Version: 2.0.50727
X-Powered-By: ASP.NET
```



chapter 44 Street Events

The Street Events API is a web service providing access to StreetEvents' proprietary content. The service allows searching for events, retrieving detail for specific events, and retrieving events related to specific companies.

The following operations are available through the Street Events service:

- **Get Economic Headlines (GetEconomicHeadlines_1)** - searches for economic events based on date/time range, and/or relatedness to one or more specified market country code.
- **Get Event (GetEvent_1)** - retrieves details for a specific event.
- **Get Event Headlines (GetEventHeadlines_1)** - searches for events based on date/time range, type of event, relatedness to specific symbols or symbols in a portfolio, and/or relatedness to one or more specified markets or industries.
- **Get Event Headlines Overview (GetEventHeadlinesOverview_1)** - retrieves a limited set of recent and upcoming events related to a specific company.
- **Get Webcast Url (GetWebcastUrl_1)** - retrieves the url for a specific webcast.

44.1 Authentication/Authorization, Service Endpoint, and Required Headers

Authorization

All requests to the Street Events service require an authorization token. For details, see section Understanding Authentication Tokens.

Authentication

The Street Events service uses Reuters impersonation tokens for each effective user. In this case, Thomson Reuters must create each user before your application authenticates them. Unmanaged effective users are not supported in Street Events.

For additional information on creating a Service Token, see section Creating a Token.

Service Endpoint

Street Events Endpoint

`http://api.rkd.reuters.com/api/StreetEvents/StreetEvents.svc`

Required Header

Required HTTP Headers

POST api/StreetEvents/StreetEvents.svc HTTP/1.1
Content-Type: application/soap+xml
Host: api.rkd.reuters.com
Content-Length: [length]

44.2 WSDL

WSDL:

`http://api.rkd.reuters.com/schemas/StreetEvents/wsd/StreetEvents_1_HttpAndRKDToken.wsdl`



44.3 Get Economic Headlines (GetEconomicHeadlines_1)

GetEconomicHeadlines_1 request allows clients to search for economic events based on when they occur, and/or inclusion of that company in specific set of country codes. Each criterion field included in a request is combined with other criteria using Boolean 'AND' logic- i.e., adding additional criteria to a request will increasingly filter the returned event headlines. Responses to all requests are limited to a maximum of 2000 headlines. The operation supports paging and sorting.

The following example requests economic headlines for the specified time range and 'US' country code:

XML Sample Request - Retrieving Economic Headlines

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/StreetEvents/StreetEvents.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/26/webservices/rkd/StreetEvents_1/GetEconomicHeadlines_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetEconomicHeadlines_Request_1 xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/StreetEvents_1"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xmlns:c="http://www.reuters.com/ns/2009/01/26/webservices/rkd/StreetEvents_1_Criteria"
      xmlns:e="http://www.reuters.com/ns/2009/01/26/webservices/rkd/StreetEvents_1_Events">
      <c:DateTimeRange>
        <c:From>2009-03-10T09:30:47.0Z</c:From>
        <c:To>2009-03-15T09:30:47.0Z</c:To>
      </c:DateTimeRange>
      <e:MarketCountryCodes>
        <e:CountryCode>US</e:CountryCode>
      </e:MarketCountryCodes>
      <e:Pagination>
        <e:PageNumber>1</e:PageNumber>
        <e:RecordsPerPage>2</e:RecordsPerPage>
      </e:Pagination>
    </GetEconomicHeadlines_Request_1>
  </Body>
</Envelope>
```

The request can take the following attributes:

Attribute	Description
DateTimeRange	The date/time range over which events must be included in the search results. This is a required field, and the From date must precede the To date.
MarketCountryCodes	An optional array of ISO 3166 country codes. If included, only economic event headlines related to the specified country or countries will be returned by the search. If left empty or null, no market/country-based filtering will be done.
Classification	An optional array of Economic Classification enumerations restricting the response to events with the specified classifications. Since events may have multiple classifications, the response may still indicate classifications outside of the subset included in this filter. Possible values are: • Consumer sector • External sector • Government sector • Industry sector • Labour market • Money and finance • National accounts • Prices • Surveys and cyclical indexes • Other If left null or empty, no classification filter will be applied.



SortOrder	An optional field specifying the sort field and sort direction. If left blank or empty, default sorting is by ascending date. For more details see section SortCriterion.
Pagination	A required structure indicating which page to return and how many records to define as a "page". Pagination is a required field. The PageNumber and RecordsPerPage properties of Pagination must both be greater than 0. For more details see section Pagination.

The request returns the following information:

XML Sample Response - Retrieving Economic Headlines

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/26/webservices/rkd/StreetEvents_1/
    GetEconomicHeadlines_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-02-12T14:04:32.1894661Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetEconomicHeadlines_Response_1 xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/StreetEvents_1">
      <EconomicHeadlines xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/StreetEvents_1_Events">
        <EconomicHeadline>
          <EventId>2044329</EventId>
          <EventType>EconomicEvents</EventType>
          <Duration>
            <EndDateTime>2009-03-10T11:45:00</EndDateTime>
            <EndQualifier>None</EndQualifier>
            <IsEstimate>false</IsEstimate>
            <StartDateTime>2009-03-10T11:45:00</StartDateTime>
            <StartQualifier>DateTime</StartQualifier>
          </Duration>
          <EventName>ICSC-UBS Retail Chain Store Sales (w/o Mar. 6, 2009)</EventName>
          <CountryCode>US</CountryCode>
          <EconomicIndicator>
            <IndicatorName></IndicatorName>
            <Unit></Unit>
            <Scale></Scale>
            <Period>w/o Mar. 6, 2009</Period>
            <ExpectedValue>0.0000</ExpectedValue>
            <ActualValue>0.0000</ActualValue>
            <PriorValue>0.0000</PriorValue>
            <LastUpdate>2008-12-01T16:00:06.02Z</LastUpdate>
            <Classifications></Classifications>
            <DataStreamMnemonic></DataStreamMnemonic>
          </EconomicIndicator>
        </EconomicHeadline>
        <EconomicHeadline>
          <EventId>2065162</EventId>
          <EventType>EconomicEvents</EventType>
          <Duration>
            <EndDateTime>2009-03-10T12:55:00</EndDateTime>
            <EndQualifier>None</EndQualifier>
            <IsEstimate>false</IsEstimate>
            <StartDateTime>2009-03-10T12:55:00</StartDateTime>
            <StartQualifier>DateTime</StartQualifier>
          </Duration>
          <EventName>Redbook Retail Sales Index (w/o Mar. 6, 2009)</EventName>
          <CountryCode>US</CountryCode>
          <EconomicIndicator>
            <IndicatorName></IndicatorName>
            <Unit></Unit>
            <Scale></Scale>
            <Period>w/o Mar. 6, 2009</Period>
            <ExpectedValue>0.0000</ExpectedValue>
            <ActualValue>0.0000</ActualValue>
            <PriorValue>0.0000</PriorValue>
            <LastUpdate>2009-01-06T14:00:06.13Z</LastUpdate>
            <Classifications></Classifications>
            <DataStreamMnemonic></DataStreamMnemonic>
          </EconomicIndicator>
        </EconomicHeadline>
      </EconomicHeadlines>
    </GetEconomicHeadlines_Response_1>
  </s:Body>
</s:Envelope>
```



```

    </EconomicIndicator>
  </EconomicHeadline>
</EconomicHeadlines>
<PaginationResult xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/StreetEvents_1_Events">
  <PageNumber>1</PageNumber>
  <RecordsOnPage>2</RecordsOnPage>
  <RecordsPerPage>0</RecordsPerPage>
  <TotalRecords>22</TotalRecords>
</PaginationResult>
</GetEconomicHeadlines_Response_1>
</Body>
</Envelope>

```

Attribute	Description
Economic Headlines	A collection of Economic event "headlines" matching the request criteria. If no matches were found, this will be an empty array. For more details see section EconomicHeadlines.
Pagination Result	A structure indicating the current page, the number of results on the page, and the total number of headlines matching the search criteria. For more details see section PaginationResult.

44.4 Get Event (GetEvent_1)

GetEvent_1 returns details related to a single event.

The following example requests details for the event with '2120870' EventId and 'RIC' and 'ExchangeTicker' symbol types:

XML Sample Request - Retrieving Event Details	
<pre> <Envelope xmlns="http://www.w3.org/2003/05/soap-envelope"> <Header> <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/StreetEvents/StreetEvents.svc</To> <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID> <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/26/webservices/rkd/StreetEvents_1/GetEvent_1</Action> <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1"> <ApplicationID>[AppID]</ApplicationID> <Token>[service token]</Token> </Authorization> </Header> <Body> <GetEvent_Request_1 xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/StreetEvents_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:c="http://www.reuters.com/ns/2009/01/26/webservices/rkd/StreetEvents_1_Criteria" xmlns:e="http://www.reuters.com/ns/2009/01/26/webservices/rkd/StreetEvents_1_Events"> <e:EventId>2120870</e:EventId> <c:OutputSymbolTypes> <c:OutputSymbolType>RIC</c:OutputSymbolType> <c:OutputSymbolType>ExchangeTicker</c:OutputSymbolType> </c:OutputSymbolTypes> </GetEvent_Request_1> </Body> </Envelope> </pre>	

The request can take the following attributes:

Attribute	Description
EventId	A valid event id obtained from a Headline. Note: Keep in mind that the GetEvent_1 operation accepts only 'EventIds' retrieved with the help of GetEventHeadlines_1 and GetEventHeadlinesOverview_1 operations and is not designed to return data by economic 'EventsIds'.
OutputSymbolTypes	The Organizations of headline will be returned with company identifiers as per the OutputSymbolTypes. If it is not specified, the response will default to SE Exchange Ticker. For more details see section SymbolCriterion.

Note: OutputSymbolTypes request parameter is restricted to **RIC** and **ExchangeTicker** values only.



The response returns the following information:

XML Sample Response - Retrieving Event Details

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/26/webservices/rkd/StreetEvents_1/GetEvent_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
      xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-02-12T14:04:32.1894661Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetEvent_Response_1 xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/StreetEvents_1">
      <Event xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/StreetEvents_1_Events">
        <CountryCode>US</CountryCode>
        <EventType>Conferences</EventType>
        <Duration>
          <EndTime>2009-03-10T19:00:00</EndTime>
          <EndQualifier>DateOnly</EndQualifier>
          <IsEstimate>false</IsEstimate>
          <StartTime>2009-03-06T20:00:00</StartTime>
          <StartQualifier>DateOnly</StartQualifier>
        </Duration>
        <EventId>2120870</EventId>
        <LastUpdate>2009-03-04T13:36:48.783Z</LastUpdate>
        <LiveDialIn>
          <Password xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"></Password>
          <Status>None</Status>
        </LiveDialIn>
        <LiveWebcast>
          <Status>None</Status>
          <Duration>
            <EndTime>2009-03-10T19:00:00</EndTime>
            <EndQualifier>DateOnly</EndQualifier>
            <IsEstimate>false</IsEstimate>
            <StartTime>2009-03-06T20:00:00</StartTime>
            <StartQualifier>DateOnly</StartQualifier>
          </Duration>
          <WebcastId></WebcastId>
        </LiveWebcast>
        <Name>American Academy of Dermatology Annual Meeting</Name>
        <ReplayDialIn>
          <Password xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"></Password>
          <Status>None</Status>
        </ReplayDialIn>
        <ReplayWebcast>
          <Status>None</Status>
          <Duration>
            <EndTime>0001-01-01T00:00:00</EndTime>
            <EndQualifier>None</EndQualifier>
            <IsEstimate>false</IsEstimate>
            <StartTime>2009-03-06T22:00:00</StartTime>
            <StartQualifier>DateOnly</StartQualifier>
          </Duration>
          <WebcastId></WebcastId>
        </ReplayWebcast>
        <Organizations>
          <Organization>
            <Name>American Academy of Dermatology</Name>
            <Symbols xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/StreetEvents_1_Criteria"></Symbols>
          </Organization>
        </Organizations>
        <AssociatedEvents>
          <AssociatedEvent>
            <EventType>ConferencePresentations</EventType>
            <Duration>
              <EndTime>2009-03-07T17:20:00</EndTime>
              <EndQualifier>None</EndQualifier>
              <IsEstimate>false</IsEstimate>
              <StartTime>2009-03-07T17:20:00</StartTime>
            </Duration>
          </AssociatedEvent>
        </AssociatedEvents>
      </Event>
    </GetEvent_Response_1>
  </s:Body>
</s:Envelope>
```



```

        <StartQualifier>DateTime</StartQualifier>
    </Duration>
    <EventId>2121022</EventId>
    <Name>NOVABAY PHARMACEUTICALS INC at American Academy of Dermatology Annual Meeting</Name>
    <LastUpdate>2009-03-04T15:54:54.387Z</LastUpdate>
    </AssociatedEvent>
</AssociatedEvents>
<Contacts></Contacts>
<Location>
    <Name></Name>
    <Description></Description>
    <Notes></Notes>
    <Address>
        <AddressLine1></AddressLine1>
        <AddressLine2></AddressLine2>
        <City>San Francisco</City>
        <StateProvince>CA</StateProvince>
        <PostalCode></PostalCode>
        <CountryCode></CountryCode>
    </Address>
    <Room></Room>
    <PrimaryPhoneNumber></PrimaryPhoneNumber>
    <AlternatePhoneNumber></AlternatePhoneNumber>
    <PrimaryFaxNumber></PrimaryFaxNumber>
    <AlternateFaxNumber xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"></AlternateFaxNumber>
    <Email></Email>
    <Url></Url>
</Location>
    <Notes></Notes>
    <Source>CLIENT</Source>
    <Sponsor>
        <Name>American Academy of Dermatology</Name>
        <Symbols xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/StreetEvents_1_Criteria"></Symbols>
    </Sponsor>
    <Summary></Summary>
    <RsvpInformation>
        <Deadline>0001-01-01T00:00:00</Deadline>
    </RsvpInformation>
</Event>
</GetEvent_Response_1>
</Body>
</Envelope>

```

Attribute	Description
Event	A structure describing details related to a single event. For more details see section Event.

44.5 Get Event Headlines (GetEventHeadlines_1)

GetEventHeadlines_1 allows clients to search for events based on when they occur, their event type, relation to a specific company or inclusion in a portfolio, and/or inclusion of that company in specific set of industries or markets. Each criterion field included in a request is combined with other criteria using boolean 'AND' logic- i.e., adding additional criteria to a request will increasingly filter the returned event headlines. Responses to all requests are limited to a maximum of 2000 headlines. The operation supports paging and sorting.

The following example requests event headlines for the specified time range and 'Conferences' event type in the USA:

XML Sample Request - Retrieving Event Headlines

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/StreetEvents/StreetEvents.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/26/webservices/rkd/StreetEvents_1/GetEventHeadlines_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetEventHeadlines_1Request>
      <Criteria>
        <EventTypes>Conferences</EventTypes>
        <Geography>USA</Geography>
      </Criteria>
    </GetEventHeadlines_1Request>
  </Body>
</Envelope>

```




```

</Header>
<Body>
  <GetEventHeadlines_Request_1 xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/StreetEvents_1"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:c="http://www.reuters.com/ns/2009/01/26/webservices/rkd/StreetEvents_1_Criteria"
    xmlns:e="http://www.reuters.com/ns/2009/01/26/webservices/rkd/StreetEvents_1_Events">
    <e:MarketCountryCodes>
      <e:CountryCode>US</e:CountryCode>
    </e:MarketCountryCodes>
    <c:DateTimeRange>
      <c:From>2009-03-26T09:30:47.0Z</c:From>
      <c:To>2009-03-27T09:30:47.0Z</c:To>
    </c:DateTimeRange>
    <e:EventTypes>
      <e:EventType>Conferences</e:EventType>
    </e:EventTypes>
    <e:Pagination>
      <e:PageNumber>1</e:PageNumber>
      <e:RecordsPerPage>10</e:RecordsPerPage>
    </e:Pagination>
  </GetEventHeadlines_Request_1>
</Body>
</Envelope>

```

The request can take the following attributes:

Attribute	Description
DateTimeRange	The Date/Time range over which events may be included in the search results. This is a required field, and the From date must precede the To date.
EventTypes	An optional list of types of events to include in the search results. If left empty or null, no filtering will be done on event type, and all event types may appear in the search results. For more details see section EventType.
IndustryCodes	An optional structure specifying an industry code schema and a list of codes defined in this schema. If specified, only events related to the requested industry or industries will be included in the search results. If left empty or null, no industry-based filtering will be done. Currently, GICS is the only supported schema, and this property is ignored. IndustryCodes - a list of industry codes defined in the requested schema. Note: Only numeric values are valid for the IndustryCode parameter (GICS codes).
MarketCountryCodes	An optional array of ISO 3166 country codes. If included, only events related to the specified country or countries will be returned by the search. If left empty or null, no market/country-based filtering will be done.
Pagination	A required structure indicating which page to return and how many records to define as a "page". Pagination is a required field. The PageNumber and RecordsPerPage properties of Pagination must both be greater than 0. For more details see section Pagination.
PortfolioId	An option id representing either a PortfolioWarehouse portfolio or a StreetEvents watchlist. PortfolioId may be left empty, in this case portfolio-based filtering will be done. Otherwise, PortfolioId must be convertible to an integer. Additionally, StreetEvents watchlist ids must be prefixed with "SE". Failure to meet these requirements will result in a service fault of category InvalidRequest.
SortOrder	An optional field specifying the sort field and sort direction. If left blank or empty, default sorting is by ascending date. For more details see section SortCriterion.
Symbols	An optional list of symbols by which to filter the returned headlines. If included, only events related to the listed symbols will be returned. If left empty or null, no symbol-based filtering will be done. For more details see section SymbolCriterion.
OutputSymbolTypes	The Organizations of headline will be returned with company identifiers as per the OutputSymbolTypes. If it is not specified, the response will default to SE Exchange Ticker. For more details see section SymbolCriterion

Note: OutputSymbolTypes request parameter is restricted to **RIC** and **ExchangeTicker** values only.

The response returns the following information:

XML Sample Response - Retrieving Event Headlines



```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/26/webservices/rkd/StreetEvents_1/GetEventHeadlines_1_Reply</a:Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-02-12T14:04:32.1894661Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetEventHeadlines_Response_1 xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/StreetEvents_1">
      <EventHeadlines xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/StreetEvents_1_Events">
        <Headline>
          <CountryCode>US</CountryCode>
          <EventType>Conferences</EventType>
          <Duration>
            <EndTime>2009-03-27T10:00:00</EndTime>
            <EndQualifier>DateOnly</EndQualifier>
            <IsEstimate>>false</IsEstimate>
            <StartTime>2009-03-23T10:00:00</StartTime>
            <StartQualifier>DateOnly</StartQualifier>
          </Duration>
          <EventId>2087902</EventId>
          <LastUpdate>2009-02-02T14:32:03.447Z</LastUpdate>
          <LiveDialIn>
            <Password xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"></Password>
            <Status>None</Status>
          </LiveDialIn>
          <LiveWebcast>
            <Status>None</Status>
            <Duration>
              <EndTime>2009-03-27T10:00:00</EndTime>
              <EndQualifier>DateOnly</EndQualifier>
              <IsEstimate>>false</IsEstimate>
              <StartTime>2009-03-23T10:00:00</StartTime>
              <StartQualifier>DateOnly</StartQualifier>
            </Duration>
            <WebcastId></WebcastId>
          </LiveWebcast>
          <Name>Merrill Lynch Sun City 1-on-1 Conference</Name>
          <ReplayDialIn>
            <Password xsi:nil="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"></Password>
            <Status>None</Status>
          </ReplayDialIn>
          <ReplayWebcast>
            <Status>None</Status>
            <Duration>
              <EndTime>0001-01-01T00:00:00</EndTime>
              <EndQualifier>None</EndQualifier>
              <IsEstimate>>false</IsEstimate>
              <StartTime>2009-03-23T12:00:00</StartTime>
              <StartQualifier>DateOnly</StartQualifier>
            </Duration>
            <WebcastId></WebcastId>
          </ReplayWebcast>
          <Organization>
            <Name>Merrill Lynch</Name>
            <Symbols xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/StreetEvents_1_Criteria"></Symbols>
          </Organization>
          <RsvpRequired>>false</RsvpRequired>
        </Headline>
        ....
      </EventHeadlines>
      <PaginationResult xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/StreetEvents_1_Events">
        <PageNumber>1</PageNumber>
        <RecordsOnPage>10</RecordsOnPage>
        <RecordsPerPage>10</RecordsPerPage>
        <TotalRecords>16</TotalRecords>
      </PaginationResult>
    </GetEventHeadlines_Response_1>
  </s:Body>
</Envelope>

```



Attribute	Description
EventHeadlines	A collection of event summary "headlines" matching the request criteria. If no matches were found, this will be an empty array. For more details see section Headline.
PaginationResult	A structure indicating the current page, the number of results on the page, and the total number of headlines matching the search criteria. For more details see section PaginationResult.

44.6 Get Event Headlines Overview (GetEventHeadlinesOverview_1)

GetEventHeadlinesOverview_1 request returns a limited set of recent and upcoming events related to a single company.

The following example requests overview of event headlines for the 'Conferences' event type and specified symbols:

XML Sample Request - Retrieving Event Headlines Overview

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/StreetEvents/StreetEvents.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/26/webservices/rkd/StreetEvents_1/GetEventHeadlinesOverview_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetEventHeadlinesOverview_Request_1 xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/StreetEvents_1"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xmlns:c="http://www.reuters.com/ns/2009/01/26/webservices/rkd/StreetEvents_1_Criteria"
      xmlns:e="http://www.reuters.com/ns/2009/01/26/webservices/rkd/StreetEvents_1_Events">
      <e:EventTypes>
        <e:EventType>Conferences</e:EventType>
      </e:EventTypes>
      <e:RecordsPerGroup>1</e:RecordsPerGroup>
      <c:Symbol>
        <c:Type>ExchangeTicker</c:Type>
        <c:Value>**HE</c:Value>
      </c:Symbol>
    </GetEventHeadlinesOverview_Request_1>
  </Body>
</Envelope>
```

The request can take the following attributes:

Attribute	Description
EventTypes	An optional list of types of events to include in the response. If left empty or null, no filtering will be done on event type, and all event types may appear in the response. For more details see section EventType.
RecordsPerGroup	The number of event headlines to include in each returned group (Recent and Upcoming). RecordsPerGroup must be between 1 and 10, inclusive. Values outside of this range will result in a service fault.
Symbol	A required field indicating which symbol to return overview results for. For more details see section SymbolCriterion.

The response returns the following information:

XML Sample Response - Retrieving Event Headlines Overview

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
```

```

<a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/26/webservices/rkd/StreetEvents_1/
GetEventHeadlinesOverview_1_Reply</a:Action>
<CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <Date>2009-02-12T14:04:32.1894661Z</Date>
  <DoNotStore />
</CacheResponse>
<a:RelatesTo>[MessageID]</a:RelatesTo>
</s:Header>
<s:Body>
  <GetEventHeadlinesOverview_Response_1 xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/StreetEvents_1">
    <RecentEventHeadlines xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/StreetEvents_1_Events" />
    <UpcomingEventHeadlines xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/StreetEvents_1_Events" />
  </GetEventHeadlinesOverview_Response_1>
</Body>
</Envelope>

```

Attribute	Description
RecentEventHeadlines	A list of the most recent events related to the requested symbol. The number of events in this list will be equal to the RecordsPerGroup specified in the request, or a smaller value if RecordsPerGroup exceeds the total number of available past events. These headlines are sorted by descending date. For more details see section Headline.
UpcomingEventHeadlines	A list of upcoming events related to the requested symbol. The number of events in this list will be equal to the RecordsPerGroup specified in the request, or a smaller value if RecordsPerGroup exceeds the total number of available upcoming events. These headlines are sorted by ascending date. For more details see section Headline.

44.7 Get Webcast Url (GetWebcastUrl_1)

GetWebcastUrl_1 request returns the url for viewing and event's webcast or replay webcast.

The following example requests url for the 'abcde' webcast id:

XML Sample Request - Retrieving Webcast Url

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/StreetEvents/StreetEvents.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2009/01/26/webservices/rkd/StreetEvents_1/
    GetWebcastUrl_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[service token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetWebcastUrl_Request_1 xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/StreetEvents_1"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:c="http://www.reuters.com/ns/2009/01/26/webservices/rkd/StreetEvents_1_Criteria"
    xmlns:e="http://www.reuters.com/ns/2009/01/26/webservices/rkd/StreetEvents_1_Events">
      <e:WebcastId>66E1645B-E2E2-4041-9383-E6E3C1EEFEF1</e:WebcastId>
    </GetWebcastUrl_Request_1>
  </Body>
</Envelope>

```

The request can take the following attributes:

Attribute	Description
WebcastId	Webcast Id copied from the WebcastOverview structure of an Event or Headline. Null, empty, or malformed values will result in a server fault. For more details see sections Event and Headline.

The response returns the following information:

XML Sample Response - Retrieving Webcast Url



```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2009/01/26/webservices/rkd/StreetEvents_1/GetWebcastUrl_1_Reply</a:
    Action>
    <CacheResponse xsi:type="DoNotStoreCacheResponse" xmlns="http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1" xmlns:
    xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <Date>2009-02-12T14:04:32.1894661Z</Date>
      <DoNotStore />
    </CacheResponse>
    <a:RelatesTo>[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetWebcastUrl_Response_1 xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/StreetEvents_1">
      <Url xmlns="http://www.reuters.com/ns/2009/01/26/webservices/rkd/StreetEvents_1_Events" />
    </GetWebcastUrl_Response_1>
  </Body>
</Envelope>

```

Attribute	Description
Url	A url to the requested webcast.

44.8 StreetEvents Data Type Reference

This section contains reference information data types used in the Street Events service.

44.8.1 Request Data Types

These types are used when making requests to the StreetEvents API.

44.8.1.1 EventType

EventType is an enumeration of the types of events included in StreetEvents content. EventType can have the following values:

- **Conferences**
- **CorporateCallsAndPresentations**
- **EarningsCallsAndPresentations**
- **EarningsReleases**
- **EconomicEvents**
- **GuidanceCallsAndPresentations**
- **MergerAndAcquisitionCallsAndPresentations**
- **SalesAndTradingStatementCallsAndPresentations**
- **SalesAndTradingStatementReleases**
- **ShareholderAndAnnualMeetings**

44.8.1.2 Pagination

Attribute	Description
PageNumber	The requested page of a multi-page set of headlines. This field is 1-based - specifying PageNumber=1 returns the first available page.
RecordsPerPage	The maximum number of headlines to include in the returned page of results.

The Pagination field allows the client to page through a large set of headlines. Typical usage is to make a first search with PageNumber set to 1 and RecordsPerPage set to a modest value (25 is recommended). The PaginationResult field of the response can then be used to calculate the meaningful range of values for PageNumber which can be used on subsequent searches using the same search criteria.

See also section [PaginationResult](#).

Note: Specifying a combination of PageNumber and RecordsPerPage which exceeds the total available headlines for a given

search will result in zero records returned.

44.8.1.3 PaginationResult

Attribute	Description
PageNumber	The page number of the current set of headlines. This value is 1-based, and will always match the PageNumber specified in the request. See also section Pagination .
RecordsOnPage	The number of records in the current set of headlines. This value will match the RecordsPerPage specified in the request except when the requested PageNumber matches or exceeds the total available pages.
TotalRecords	The total number of headlines matching the search criteria.

44.8.1.4 SortCriterion

Attribute	Description
By	The field on which to sort. Possible values are: • Date • Ticker (only for Get Event Headlines) • CompanyName • EventName • EventType - Note: The applied EventType sorting is based on the "eventsort" column found in one of the tables. It is not alphabetical by event type name. If absent or set to a value other those listed above, sorting will default to Date.
Direction	Specifies whether to sort Ascending or Descending.
SortDirection	SortDirection is an enumeration with values "Ascending" and "Descending".

44.8.1.5 SymbolCriterion

Attribute	Description
Symbol	Symbol Type and Value.
Type	The symbol type. The following symbol types are supported: • CIK • CUSIP • CUSIP6 • EXCHANGETICKER • IBES • ISIN • ILXID • RIC • SEDOL • TKOCOMPANYID • TKOQUOTEID • TKOSECURITYID
Value	A symbol of the given symbol type.

44.8.2 Response Data Types

These types are returned in the responses of the StreetEvents API.

44.8.2.1 Event

Attribute	Description
CountryCode	The ISO 3166 country code to which this event is related.
EventType	The type of event described by this headline. For more details see section EventType .



Duration	The start and end times of the event (a conference call or webcast). Can have the following values: • 'IsEstimate' - If true, the start and end dates/times are estimated. • DateTimeQualifier - is an enumeration which describes adjustments applied to a date and time. Possible values are: • None • DateOnly • DateTime • BeforeMarketOpen • AfterMarketClose
EventId	A unique id for this event. This id may be used in a subsequent call to the GetEvent_1 request.
LastUpdate	The date/time at which event information was last updated.
LiveDialIn	A structure describing when and how to access the live dial-in. Can have the following values: • Duration - the duration of a dial-in conference call or conference-call replay. • Password - the password, if required, for a dial-in. • PhoneNumber - the phone number for a dial-in. • AlternatePhoneNumber - the alternate phone number, if any, for a dial-in.
LiveWebcast	A structure describing the status and, if available, a content identifier which may be used to retrieve the webcast url using the GetWebcastUrl_1 request. Can have the following values: • Status - whether a webcast is available, expected, or not available. • Duration - the start and end times of the webcast. • WebcastId - if the status is Available, a content identifier which may be used to retrieve the webcast url using the GetWebcastUrl_1 request.
Name	The name of the event.
ReplayDialIn	A structure describing when and how to access the replay dial-in. Can have the following values: • Duration - the duration of a dial-in conference call or conference-call replay. • Password - the password, if required, for a dial-in. • PhoneNumber - the phone number for a dial-in. • AlternatePhoneNumber - the alternate phone number, if any, for a dial-in.
ReplayWebcast	A structure describing the status and, if available, a content identifier which may be used to retrieve the replay webcast url using the GetWebcastUrl_1 request. Can have the following values: • Status - whether a webcast is available, expected, or not available. • Duration - the start and end times of the webcast. • WebcastId - if the status is Available, a content identifier which may be used to retrieve the webcast url using the GetWebcastUrl_1 request.
Organizations	A list of organizations related to the event. Can have the following values: • CompanyName - the organization's name. • Symbols - collections of organization's symbols. See section SymbolCriterion for more details.
AssociatedEvents	A list of events associated with this event. See section EventOverview for more details.
Contacts	A list of contacts for this event including their names, organization names, titles, addresses, phone numbers, e-mails, Urls.
Location	The location of this event. Can have the following values: • Name - name of the location. • Description - description of the location. • Notes - notes about this location. • Address - address of the location. • Room - a room for this location. • PrimaryPhoneNumber - a primary phone number for this location. • AlternatePhoneNumber - an alternate phone number for this location. • PrimaryFaxNumber - a primary fax number for this location. • AlternateFaxNumber - an alternate fax number for this location • Email - an email for this location. • Url - a web url for this location.
Notes	Notes on this event.
Source	The source of the event information. For example: CLIENT or Sponsor.
Sponsor	The company name and symbol of the event's sponsor. Can have the following values: • CompanyName - the organization's name. • Symbols - collections of organization's symbols. See section SymbolCriterion for more details.



Summary	A summary of this event.
RsvpInformation	A structure indicating how to RSVP to this event. Can have the following values: • Deadline - date/time before which Rsvp must be submitted. • Email - e-mail address to which Rsvp may be submitted. • FaxNumber - fax number to which Rsvp may be submitted. • PhoneNumber - phone number for submitting the Rsvp. • Url - web-site through which an Rsvp may be submitted.
Dividend	Dividend details. This field is populated only for events of type ExDividends. Can have the following values: • AnnouncementDate - date on which an income payment was first announced. • ExDate - date on or after which transactions are not eligible for an Income Payment, unless traded on a special basis. • PaymentDate - income payment date. • RecordDate - date by which transfers must be received at the registrar to participate in direct distribution of income. • Amount - amount of the dividend. • Currency - currency in which the dividend was paid. • PaymentType - describes the nature or type of the dividend. See section IdcPaymentTypeCode1 for more details. • SecondaryPaymentType - provides supplemental, or alternative, to PaymentType. See section IdcPaymentTypeCode2 for more details.
Split	Split details. This field is populated only for events of type StockSplits. Can have the following values: • AnnouncementDate - date on which the capital event details were first added in FTID's system. • ExDate - date on which the event begins and new purchases of the security no longer confer the benefits of the issue unless special trading conditions are attached. • PaymentDate - first day of trading for capital event securities. • RecordDate - holders registered by this date may participate in the capital event. • Amount - a value reflecting the dilution or concentration of the parent security capital relative to the pre-issue capital. For example, a 2-for-1 stock split would equal 2.0. • Ratio
IPO	IPO details. This field is populated only for events of type IpoFilings, IpoLockupExpirations, IpoPricings, IpoWithdrawals, SecondaryWithdrawals, SecondaryPricings, and SecondaryFilings. Can have the following values: • FilingDate - date on which IPO was filed. • LockupExpiryDate • OfferingPrice • FilingPriceLow • FilingPriceHigh • FinalPrice • TotalShares • WithdrawalDate • PricingDate • Exchange - exchange in which the IPO was filed. • FormFiled - form with which the IPO was recorded. • LeadUnderwriter • Description
FiscalPeriod	Fiscal Period of the event. Can have the following values: • Quarter - quarter of the Fiscal Period. • FiscalYear - fiscal Year of the Fiscal Period.

44.8.2.2 EventOverview

Attribute	Description
EventType	The type of this event. For more details see section EventType.
Duration	The start and end times of the event. Can have the following values: • 'IsEstimate' - If true, the start and end dates/times are estimated. • DateTimeQualifier - is an enumeration which describes adjustments applied to a date and time. Possible values are: • None • DateOnly



	• DateTime • BeforeMarketOpen • AfterMarketClose
EventId	A unique id for this event. This id may be used in a subsequent call to the GetEvent_1 request.
Name	The name of this event.
LastUpdate	The date/time at which event information was last updated.
Organization	The company name and symbol of the event's subject company. Can have the following values: • CompanyName - the organization's name. • Symbols - collections of organization's symbols. See section SymbolCriterion for more details.

44.8.2.3 Headline

Attribute	Description
CountryCode	The ISO 3166 country code to which this event is related.
EventType	The type of event described by this headline. For more details see section EventType.
Duration	The start and end times of the event (a conference call or webcast). Can have the following values: • 'IsEstimat' - If true, the start and end dates/times are estimated. • DateTimeQualifier - is an enumeration which describes adjustments applied to a date and time. Possible values are: • None • DateOnly • DateTime • BeforeMarketOpen • AfterMarketClose
EventId	A unique id for this event. This id must be used in a subsequent call to the GetEvent_1 request.
LastUpdate	The date/time at which event information was last updated.
LiveDialIn	A structure describing when and how to access the live dial-in. Can have the following values: • Duration - the duration of a dial-in conference call or conference-call replay. • Password - the password, if required, for a dial-in. • PhoneNumber - the phone number for a dial-in. • AlternatePhoneNumber - the alternate phone number, if any, for a dial-in.
LiveWebcast	A structure describing the status and, if available, a content identifier which may be used to retrieve the webcast url using the GetWebcastUrl_1 request. Can have the following values: • Status - whether a webcast is available, expected, or not available. • Duration - the start and end times of the webcast. • WebcastId - if the status is Available, a content identifier which may be used to retrieve the webcast url using the GetWebcastUrl_1 request.
Name	The name of the event.
ReplayDialIn	A structure describing when and how to access the replay dial-in. Can have the following values: • Duration - the duration of a dial-in conference call or conference-call replay. • Password - the password, if required, for a dial-in. • PhoneNumber - the phone number for a dial-in. • AlternatePhoneNumber - the alternate phone number, if any, for a dial-in.
ReplayWebcast	A structure describing the status and, if available, a content identifier which may be used to retrieve the replay webcast url using the GetWebcastUrl_1 request. Can have the following values: • Status - whether a webcast is available, expected, or not available. • Duration - the start and end times of the webcast. • WebcastId - if the status is Available, a content identifier which may be used to retrieve the webcast url using the GetWebcastUrl_1 request.
Organization	The company name and symbol of the event's subject company. Can have the following values: • CompanyName - the organization's name. • Symbols - collections of organization's symbols. See section SymbolCriterion for more details.
RsvpRequired	Indicates whether this event requires an rsvp.
Location	The location of this event. Can have the following values: • Name - name of the location. • Description - description of the location.



- **Notes** - notes about this location.
- **Address** - address of the location.
- **Room** - a room for this location.
- **PrimaryPhoneNumber** - a primary phone number for this location.
- **AlternatePhoneNumber** - an alternate phone number for this location.
- **PrimaryFaxNumber** - a primary fax number for this location.
- **AlternateFaxNumber** - an alternate fax number for this location.
- **Email** - an email for this location.
- **Url** - a web url for this location.

44.8.2.4 EconomicHeadlines

Attribute	Description
EventId	A unique id for this event.
EventType	An optional list of types of events to include in the search results. If left empty or null, no filtering will be done on event type, and all event types may appear in the search results. For more details see section EventType.
Duration	Date/time on which the subject document was filed. Can have the following values: • 'IsEstimate' - If true, the start and end dates/times are estimated. • DateTimeQualifier - is an enumeration which describes adjustments applied to a date and time. Possible values are: • None • DateOnly • DateTime • BeforeMarketOpen • AfterMarketClose
EventName	The name of the event.
CountryCode	The ISO 3166 country code to which this event is related.
IndicatorName	Indicator name for the event.
Unit	Unit is derived from unit based on Expectedlevel and CalculatedheaderName column from U_EventEconomicIndicatorDetail table.
Scale	Scale is derived from scale based on Expectedlevel and CalculatedheaderName column from U_EventEconomicIndicatorDetail table.
Period	The Month or the quarter of the year the event belongs to.
ExpectedValue	Estimated value.
ActualValue	Actual value.
PriorValue	Previous value.
LastUpdate	Last updated date/time.
Classification	An optional array of Economic Classification enumerations restricting the response to events with the specified classifications. Since events may have multiple classifications, the response may still indicate classifications outside of the subset included in this filter. Possible values are: • Consumer sector • External sector • Government sector • Industry sector • Labour market • Money and finance • National accounts • Prices • Surveys and cyclical indexes • Other
Mnemonics	Mnemonics.



44.8.2.5 IdcPaymentTypeCode1

IdcPaymentTypeCode1 is an enumeration with the following values:

- NormalCashDividend
- CashDividendPayableOnShares
- LessForeignTaxesNonCanadian
- SpecialDividendsAndLiquidations
- OptionalDividend
- UsWithholdingIncomeTaxResident
- InitialDividendAfterSplit
- IncludesSecurityProfitsAndGains
- DividendRateUnknown
- ForeignCurrencyNonCanadian
- StockDividend
- StockSplits
- IssuesCalled
- StockRights
- CanadianFundsNonResidentTax15Percent
- CanadianFundsNonResidentTax10Percent
- UsFundsCanadianNonResidentTax15Percent
- UsFundsCanadianNonResidentTax10Percent
- ApproximateDividendRate
- StockDividendInOtherCompanyStock
- StockDividendOnIncreasedShares
- StockSplitOnIncreasedShares
- InitialCanadianDividendOnIncreasedSharesLessTax15Percent
- InitialCanadianDividendOnIncreasedSharesLessTax10Percent
- StockDividendInMoreThanTwoIssues
- PaymentOmitted
- PrincipalDividendUit
- SpecialPrincipalUit
- SpecialInterestUit
- PayableInUsDollars
- RateUnknown
- IssueCalled
- FirstPayment
- CanadianFunds
- UsFundsSubjectToCanadianWithholdingTax
- FixMismatch
- AnnouncedPayment
- NewSituation

44.8.2.6 IdcPaymentTypeCode2

IdcPaymentTypeCode2 is an enumeration with the following values:

- Undefined
- ShortPayPeriod
- LongPayPeriod
- IncludesPrincipalCapitalGains
- IncludesDividendArrears
- IncludesYearEndSpecialProceedsFromSale
- IncludesOptionalDividendsOnIncreasedShares
- DistributionOfWarrants
- CanadianCurrency
- ForeignCurrencyNonCanadian
- InitialDividendToPublic
- DividendInterestCanceled
- InitialCashDividendPayableAfterStockSplit
- InitialCashDividendPayableAfterStockDividend
- ApproximateDividend
- InitialDividendAfterSplitCanadianDollars



- InitialDividendAfterStockDividendCanadianDollars
- DividendInterestCanceledByCompany
- NetAfterTax
- Gross
- DistributionSameCompanyDifferentIssue
- DistributionOfAnIssueOfAnotherCompany
- CashEquivalents
- PartialPayment
- LimitedPartnershipDistribution
- PayableOnSharesIncludedInUnits
- PoisonPill
- ReturnOfCapital
- ReturnOfCapitalPlusIncome
- EstimatedReturnOfCapital
- EstimatedReturnOfCapitalPlusIncome
- Liquidation
- LiquidationSurrenderOfCertificatesRequired
- FinalPaymentTransferBooksAreClosed
- OptionalDividendTotalCashRateIncludedInSpecializedFields
- DividendCanBePaidOptionallyInCanadianOrUsDollars
- SpecialDividend
- SpecialDividendPlusIncome
- ExtraDividend
- ExtraDividendPlusIncome
- YearEndDividend
- YearEndDividendPlusIncome
- AdditionalDividend
- ParticipatingDividend
- ProceedsFromSaleOfRights
- RedemptionOfRights
- PayableOnPresentationOfCertificates
- CalledAndIncomePayment
- LongAndShortTermCapitalGainsPlusIncome
- LongTermCapitalGainsOnly
- LongTermCapitalGainsPlusIncome
- LongAndShortTermCapitalGainsPlusIncome2
- ShortTermCapitalGainsOnly
- ShortTermCapitalGainsPlusIncome
- CapitalGainsBreakdownUnavailable
- OtherSeeContinuationRecord
- AtCloseOfBusiness



chapter 45 Time Series

TimeSeries consists of the following operations:

- **Get InterDay Data:** retrieves historical timeseries prices on an instrument, summarised in daily, weekly or monthly periods.
- **Get IntraDay Data:** retrieves a timeseries of intraday market prices on an instrument, summarised in periods from 1 minute to 1 hour.
- **Get Exchange Data:** provides details on a particular exchange.
- **Get Timezone List:** provides time zones details for different regions.

45.1 Authentication/Authorization, Service Endpoint, and Required Headers

Authorization

All requests to the Time Series web service require an authorization token. For details, see section Understanding Authentication Tokens.

Authentication

Time Series uses Reuters impersonation tokens for each effective user. In this case, Thomson Reuters must create each user before your application authenticates them. Unmanaged effective users are not supported in Time Series.

For additional information on creating a Service Token, see section Creating a Token.

Service Endpoint

Time Series Endpoint

<http://api.rkd.reuters.com/api/TimeSeries/TimeSeries.svc>

Required Header

Required HTTP Headers

POST /api/TimeSeries/TimeSeries.svc HTTP/1.1
Content-Type: application/soap+xml
Host: api.rkd.reuters.com
Content-Length: [length]

45.2 WSDL

WSDL:

http://api.rkd.reuters.com/schemas/TimeSeries/wsd/TimeSeries_1_HttpAndRKDToken.wsdl

45.3 InterDay

Interday lets you retrieve historical time series prices on an instrument, summarised in daily, weekly or monthly periods. For each period, details such as the opening price, closing price, highest and lowest prices are retrieved. Historical time series prices for an instrument are available on a daily basis for the previous 2 years, and on a weekly or monthly basis for the previous 5 years.

Note: Interday data can go back up to 30 years in some cases.

45.3.1 Retrieving Daily InterDay Data

XSD

XSD: http://api.rkd.reuters.com/schemas/TimeSeries/TimeSeries_1.xsd

The following example requests daily information between 1/22/2007 and 1/25/2007.

XML Sample Request - Daily Interday Data

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/TimeSeries/TimeSeries.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/TimeSeries_1/GetInterdayTimeSeries_2</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetInterdayTimeSeries_Request_2 TrimResponse="false" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/TimeSeries_1">
      <Symbol>MSFT.O</Symbol>
      <StartTime>2007-01-22T00:00:00</StartTime>
      <EndTime>2007-01-25T00:00:00</EndTime>
      <Interval>DAILY</Interval>
    </GetInterdayTimeSeries_Request_2>
  </Body>
</Envelope>
```

Note: Thomson Reuters recommends that you do not query for too much data via HTTP. By design, the TimeSeries service is limited not to send more than 3600 records (rows) to minimize bandwidth consumption. Any data over the 3600 record limit is truncated. If you do need a great number of records (more than 3600 records), Thomson Reuters recommends that you break up your query into several requests and then combine the responses together.

Attribute	Description
TrimResponse	If this parameter is set to true, the API will return a much thinner XML response.
Symbol	A RIC of the instrument whose interday prices you want to retrieve.
StartTime	Start date and time criteria of the search. The format of the Start time should be: YYYY-MM-DDThh:mm:ss
EndTime	End date and time criteria of the search. The format of the Start time should be: YYYY-MM-DDThh:mm:ss Note: Please pay attention that maximum <EndDate> interval is >=2038. If you specify a greater <EndDate> interval, you will receive a blank response.
Interval	The interval between samples. The choices are: • DAILY • WEEKLY • MONTHLY

Note: You might get ERR_NOSUCHRIC error on TimeSeries, even though the RIC exists because Thomson Reuters TimeSeries service gives the same error ("ERR_NOSUCHRIC") for RICs which it does not have history for and also for invalid RICs. So, if you are sure that your RIC exists, then it might be missing in the Thomson Reuters TimeSeries database. TRKD logs all requests for RICs which fail, and we periodically add RICs which are requested but not available.

XML Sample Response - Daily Interday Data



```

<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/
rkd/TimeSeries_1/GetInterdayTimeSeries_2_Reply
    </a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetInterdayTimeSeries_Response_2 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/TimeSeries_1">
      <Row>
        <OPEN>31.059999465942383</OPEN>
        <HIGH>31.1200008392334</HIGH>
        <LOW>30.510000228881836</LOW>
        <CLOSE>30.719999313354492</CLOSE>
        <VOLUME>5.6152E7</VOLUME>
        <TIMESTAMP>2007-01-22T00:00:00+00:00</TIMESTAMP>
      </Row>
      ....
      <Row>
        <OPEN>31.079999923706055</OPEN>
        <HIGH>31.479999542236328</HIGH>
        <LOW>30.450000762939453</LOW>
        <CLOSE>30.450000762939453</CLOSE>
        <VOLUME>9.9382E7</VOLUME>
        <TIMESTAMP>2007-01-25T00:00:00+00:00</TIMESTAMP>
      </Row>
    </GetInterdayTimeSeries_Response_2>
  </s:Body>
</s:Envelope>

```

Note: The response for FI RICs return additional value in the response - 'CLOSEYIELD':

XML Sample Response - Retrieving Daily Interday Data for 'AU10YT=XX' FI RIC

```

<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/
rkd/TimeSeries_1/GetInterdayTimeSeries_2_Reply
    </a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetInterdayTimeSeries_Response_2 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/TimeSeries_1">
      <Row>
        <OPEN>"97.553"</OPEN>
        <HIGH>"98.07"</HIGH>
        <LOW>"97.553"</LOW>
        <CLOSE>"97.844"</CLOSE>
        <CLOSEYIELD>"4.755"</CLOSEYIELD>
        <TIMESTAMP>"2009-04-30T00:00:00+00:00"</TIMESTAMP>
      </Row>
      <Row>
        <OPEN>"92.6"</OPEN>
        <HIGH>"93.023"</HIGH>
        <LOW>"92.113"</LOW>
        <CLOSE>"92.396"</CLOSE>
        <CLOSEYIELD>"5.46313"</CLOSEYIELD>
        <TIMESTAMP>"2009-09-23T00:00:00+00:00"</TIMESTAMP>
      </Row>
      ....
    </GetInterdayTimeSeries_Response_2>
  </s:Body>
</s:Envelope>

```



45.4 IntraDay

The INTRADAY function lets you retrieve a timeseries of intraday market prices on an instrument, summarised in periods from 1 minute to 1 hour (configurable). This is typically used in an intraday graph to show how the price has changed during a day. For each period in the intraday timeseries, open price (the first tick in the period), close price (the last tick in the period), high price, low price and volume are returned. Intraday timeseries covering one day is returned. Note that "tick-by-tick" intraday timeseries is not available.

The supported time intervals (periods) for Intraday timeseries are:

- 1 minute
- 5 minutes
- 30 minutes
- 60 minutes

Note: All values for the current day and 10 previous days are available. Timeseries Intraday request returns the latest traded price for the specified RIC even if the request is made during weekend or holidays.

45.4.1 Retrieving Intraday Data

XSD

XSD: http://api.rkd.reuters.com/schemas/TimeSeries/TimeSeries_1.xsd

The following example requests hourly information for 04/28/08.

XML Sample Request - Hourly Intraday Data

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/TimeSeries/TimeSeries.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/TimeSeries_1/GetIntradayTimeSeries_2</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetIntradayTimeSeries_Request_2 TrimResponse="false" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/TimeSeries_1">
      <Symbol>MSFT.O</Symbol>
      <StartTime>2008-04-28T00:00:00</StartTime>
      <EndTime>2008-04-29T00:00:00</EndTime>
      <Interval>HOURLY</Interval>
    </GetIntradayTimeSeries_Request_2>
  </Body>
</Envelope>
```

Attribute	Description
TrimResponse	If this parameter is set to true, the API will return a much thinner XML response.
Symbol	A RIC of the instrument, intraday prices of which you want to retrieve.
Day	Allows you to retrieve data for a specific day by selecting one of the following options: • Latest • Today • Yesterday • Two Days Ago • Three Days Ago • Four Days Ago • Five Days Ago • Custom Date If the Custom Date option is selected (by default), the Start Time and End Time parameters are available.



	If you select Latest , the response will show data of the latest day when trading operations occurred.
StartTime	Start date and time criteria of the search. The format of the Start time should be: YYYY-MM-DDThh:mm:ss
EndTime	End date and time criteria of the search. The format of the Start time should be: YYYY-MM-DDThh:mm:ss Note: Please pay attention that the maximum <EndDate> value is 2038. If you specify a greater <EndDate> value, you will receive a blank response.
TimeZone	Available only if no custom date (StartTime and EndTime) is specified. Use this parameter to retrieve data adjusted for a specific time zone. The short name of a time zone should be used in the request. The default is UTC. To get the list of supported time zones, use the GetTimeZoneList operation. You can also use the value 'LOCAL' to adjust data for the instrument's exchange time zone.
Interval	The interval between samples. The choices are: • MINUTE • 5MINUTES • 30MINUTES • HOUR

Note: You might get ERR_NOSUCHRIC error on TimeSeries, even though the RIC exists because Thomson Reuters TimeSeries service gives the same error ("ERR_NOSUCHRIC") for RICs which it does not have history for and also for invalid RICs. So, if you are sure that your RIC exists, then it might be missing in the Thomson Reuters TimeSeries database. TRKD logs all requests for RICs which fail, and we periodically add RICs which are requested but not available.

XML Sample Response - Hourly Intraday Data

```
<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/rkd/TimeSeries_1/GetIntradayTimeSeries_2_Reply</a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetIntradayTimeSeries_Response_2 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/TimeSeries_1">
      <Row>
        <OPEN>29.829999923706055</OPEN>
        <HIGH>29.829999923706055</HIGH>
        <LOW>29.829999923706055</LOW>
        <CLOSE>29.829999923706055</CLOSE>
        <VOLUME>3400</VOLUME>
        <TIMESTAMP>2008-04-28T07:00:00-05:00</TIMESTAMP>
      </Row>
      <Row>
        <OPEN>29.829999923706055</OPEN>
        <HIGH>29.829999923706055</HIGH>
        <LOW>29.829999923706055</LOW>
        <CLOSE>29.829999923706055</CLOSE>
        <VOLUME>81942</VOLUME>
        <TIMESTAMP>2008-04-28T08:00:00-05:00</TIMESTAMP>
      </Row>
      ...
      <Row>
        <OPEN>28.989999771118164</OPEN>
        <HIGH>28.989999771118164</HIGH>
        <LOW>28.989999771118164</LOW>
        <CLOSE>28.989999771118164</CLOSE>
        <VOLUME>20808</VOLUME>
        <TIMESTAMP>2008-04-28T19:00:00-05:00</TIMESTAMP>
      </Row>
    </s:Body>
  </s:Envelope>
```

Note: The response for FI RICs return additional value in the response - 'CLOSEYIELD':



XML Sample Response - Retrieving Hourly Intraday Data for 'PT30YT=XX' FI RIC

```

<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/rkd/TimeSeries_1/GetIntradayTimeSeries_2_Reply</a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetIntradayTimeSeries_Response_2 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/TimeSeries_1">
      <Row>
        <OPEN>"88.804"</OPEN>
        <HIGH>"88.83"</HIGH>
        <LOW>"88.76"</LOW>
        <CLOSE>"88.76"</CLOSE>
        <CLOSEYIELD>"4.854"</CLOSEYIELD>
        <TIMESTAMP>"2010-03-12T08:00:00+00:00"</TIMESTAMP>
      </Row>
      <Row>
        <OPEN>"88.81"</OPEN>
        <HIGH>"89.1"</HIGH>
        <LOW>"88.8"</LOW>
        <CLOSE>"88.8"</CLOSE>
        <CLOSEYIELD>"4.851"</CLOSEYIELD>
        <TIMESTAMP>"2010-03-12T09:00:00+00:00"</TIMESTAMP>
      </Row>
      .....
    </GetIntradayTimeSeries_Response_2>
  </s:Body>
</s:Envelope>

```

If the request contains **Day** and/or **TimeZone** parameters, the response will also return minimum and maximum values for OPEN, HIGH, LOW, CLOSE, VOLUME and CLOSEYIELD.

Please note that these values are not returned if the request uses **StartTime** and **EndTime**.

45.5 Get Exchange Data (GetExchangeData_1)

The GetExchangeData_1 request can be used to retrieve details on a particular exchange including its operating hours:

The following example requests data for Bratislava exchange:

XML Sample Request - Get Exchange Data

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/TimeSeries/TimeSeries.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/TimeSeries_1/GetExchangeData_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetExchangeData_Request_1 exchange="BRA" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/TimeSeries_1" />
  </Body>
</Envelope>

```

Attribute	Description
exchange	Exchange code.

The response returns the following data:



XML Sample Response - Get Exchange Data

```

<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/rkd/TimeSeries_1/GetExchangeData_1_Reply</a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <ns0:GetExchangeData_Response_1 xmlns:ns0="http://www.reuters.com/ns/2006/05/01/webservices/rkd/TimeSeries_1" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/TimeSeries_1">
      <ns0:ExchangeDataResponse>
        <ns0:ExchangeName>BRATISLAVA SE</ns0:ExchangeName>
        <ns0:Timezone>VIENNA</ns0:Timezone>
        <ns0:TradingWeek>
          <ns0:TradingDay>
            <ns0:Session>
              <ns0:StartDay>Monday</ns0:StartDay>
              <ns0:StartTime>0001-01-01T11:00:00+00:00</ns0:StartTime>
              <ns0:EndDay>Monday</ns0:EndDay>
              <ns0:EndTime>0001-01-01T14:00:00+00:00</ns0:EndTime>
            </ns0:Session>
          </ns0:TradingDay>
          <ns0:TradingDay>
            <ns0:Session>
              <ns0:StartDay>Tuesday</ns0:StartDay>
              <ns0:StartTime>0001-01-01T11:00:00+00:00</ns0:StartTime>
              <ns0:EndDay>Tuesday</ns0:EndDay>
              <ns0:EndTime>0001-01-01T14:00:00+00:00</ns0:EndTime>
            </ns0:Session>
          </ns0:TradingDay>
          ....
        </ns0:TradingWeek>
        <ns0:IDNExchID>328</ns0:IDNExchID>
      </ns0:ExchangeDataResponse>
    </ns0:GetExchangeData_Response_1>
  </s:Body>
</s:Envelope>

```

The response returns the following attributes for the specified exchange:

Attribute	Description
ExchangeName	Shows full name of the exchange.
Timezone	Shows time zone used at the specified exchange.
TradingWeek	Shows operating hours for each trading day. Contains the following values: - StartDay - name of the day when trading session starts; - StartTime - time when trading session starts. - EndDay - name of the day when trading session ends; - EndTime - time when trading session ends.
IDNExchID	Exchange ID.

45.6 Get Timezone List (GetTimezoneList_1)

The GetTimezoneList_1 operation provides time zones details for different regions. This operation when used with the GetExchangeData_1 operation allows the user to look at trading hours of different exchanges in their local time zone.

The GetTimezoneList_1 request doesn't take any input parameters:

XML Sample Request - Hourly Intraday Data

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/TimeSeries/TimeSeries.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/TimeSeries_1/GetTimezoneList_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
    <ApplicationID>[AppID]</ApplicationID>
    <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetTimezoneList_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/TimeSeries_1" />
  </Body>
</Envelope>
```

The response returns the following data:

XML Sample Response - Hourly Intraday Data

```
<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/rkd/TimeSeries_1/GetIntradayTimeSeries_2_Reply</a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <ns0:GetTimezoneList_Response_1 xmlns:ns0="http://www.reuters.com/ns/2006/05/01/webservices/rkd/TimeSeries_1" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/TimeSeries_1">
      <ns0:TimezoneList>
        <ns0:Timezone>
          <ns0:ShortName>ABU</ns0:ShortName>
          <ns0:LongName>Abu Dhabi</ns0:LongName>
          <ns0:GMTOffset>240</ns0:GMTOffset>
          <ns0:HasSummerTime>>false</ns0:HasSummerTime>
        </ns0:Timezone>
        <ns0:Timezone>
          <ns0:ShortName>ALG</ns0:ShortName>
          <ns0:LongName>ALGIERS</ns0:LongName>
          <ns0:GMTOffset>60</ns0:GMTOffset>
          <ns0:HasSummerTime>>false</ns0:HasSummerTime>
        </ns0:Timezone>
        ....
        <ns0:Timezone>
          <ns0:ShortName>ZUR</ns0:ShortName>
          <ns0:LongName>ZURICH</ns0:LongName>
          <ns0:GMTOffset>60</ns0:GMTOffset>
          <ns0:HasSummerTime>true</ns0:HasSummerTime>
          <ns0:SummerOffset>120</ns0:SummerOffset>
          <ns0:SummerStart>2010-03-28T02:00:00+00:00</ns0:SummerStart>
          <ns0:SummerEnd>2010-10-31T03:00:00+00:00</ns0:SummerEnd>
        </ns0:Timezone>
      </ns0:TimezoneList>
    </ns0:GetTimezoneList_Response_1>
  </s:Body>
</s:Envelope>
```

The response returns the list with time zones (<ns0:Timezone>), each containing the following attributes:

Attribute	Description
ShortName	Shows short name of the time zone.
LongName	Shows full name of the time zone.
GMTOffset	Shows GMT offset (in minutes).
HasSummerTime	Shows whether the time zone has summer time.
SummerOffset	Shows GMT offset during summer time (in minutes).



SummerStart	Shows when summer time starts for the given time zone.
SummerEnd	Shows when summer time ends for the given time zone.



chapter 46 User Information Update

You can use the UserInfoUpdate service to retrieve and update user information from the user database.

The following operations are available through the UserInfoUpdate service:

- **Create User** (Create_1) - creates new user.
- **Modify User** (Modify_1) - modifies existing information for a particular user.
- **Get Accounts by Company ID** (GetAccountsByCompanyId_1) - retrieves all the accounts for a particular company.
- **Get User Information** (GetUserInfo_1) - retrieves all available information about a particular user.

46.1 Authentication/Authorization, Service Endpoint, and Required Headers

Authorization

All requests to the User Information Update service require an authorization token. For details, see section Understanding Authentication Tokens.

Authentication

Thomson Reuters User Information Update service uses Reuters impersonation tokens for each effective user. In this case, Thomson Reuters must create each user before your application authenticates them. Unmanaged effective users are not supported in Thomson Reuters User Information Update.

For additional information on creating a Service Token, see section Creating a Token.

Service Endpoint

UserInfoUpdate Endpoint

<http://api.rkd.reuters.com/api/UserInfoUpdate/UserInfoUpdate.svc>

Required Header

Required HTTP Headers

POST api/UserInfoUpdate/UserInfoUpdate.svc HTTP/1.1
Content-Type: application/soap+xml
Host: api.rkd.reuters.com
Content-Length: [length]

46.2 WSDL

WSDL:

http://api.rkd.reuters.com/schemas/UserInfoUpdate/wsdl/UserInfoUpdate_1_HttpAndRKDToken.wsdl

46.3 Create User (Create_1)

The Create_1 request creates a new user.

Currently, there are two ways to refer to a user in the request/responses. Alias, which is also referred to as Login Name, or User Id, which is the unique Id in the Thomson Reuters system to identify a user.

The following example creates a user with 'LoginName' "Fagus.Root@reuters.com" and specified password:

XML Sample Request - Creating User

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/UserInfoUpdate/UserInfoUpdate.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/08/08/webservices/rkd/
    UserInfoUpdate_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <Create_Request_1 xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/UserInfoUpdate_1">
      <CompanyID>30373</CompanyID>
      <AccountID>1934776</AccountID>
      <LoginName>Fagus.Root@reuters.com</LoginName>
      <LastName>Root</LastName>
      <FirstName>Fagus</FirstName>
      <JobRoleID>121</JobRoleID>
      <EmailAdd>Fagus.Root@reuters.com</EmailAdd>
      <address>
        <AddressLine1>some address</AddressLine1>
        <City>New York</City>
        <Country>USA</Country>
      </address>
    </Create_Request_1>
  </Body>
</Envelope>

```

Attribute	Description
CompanyID	Identifies the company.
AccountID	Identifies user account. The Account Id can be obtained, using the GetAccountsByCompanyId_1 request. See section Get Accounts by Company ID (GetAccountsByCompanyId_1) for more details.
Enabled	Enables or disables the user.
LoginName	Sometimes it is referred to as "alias"; this should be the user's email address.
LastName	Shows user's last name.
FirstName	Shows user's first name.
JobRoleID	Identifies user's job role. See section User Job Roles for mapping.
JobTitle	Shows user's job title.
Division	This field can be used to store the user's division. Suggested uses would include the department or business division in which the user works; for example, "Investment & Advisory division" or "Research & Asset Management". This field is meant to add a bit more insight into what the end user does.
EmailAdd	Shows user's email. It is used by the brokers for ROS entitlements.
Group	Can be used to add User Group ID, i.e. to bind a user to a certain group.
address	Shows user's address. Contains the following fields: - User Street Address 1 - User Street Address 2 - User City - User State - User Zip Code/Postal Code - User Country
Password	Specifies user's password.

The response returns the ID of the created user, which identifies the user in the Thomson Reuters system.

Note: Remember the returned UserID as there is no facility to lookup a user and retrieve the id.

XML Sample Response - Creating User

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/08/08/webservices/
      rkd/UserInfoUpdate_1/Create_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <Create_Response_1 xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/UserInfoUpdate_1">
      <UserID>12345</UserID>
    </Create_Response_1>
  </Body>
</Envelope>
```

Note: Once the user is created, it must be attached to a permission group. You can do this by using the SetPermGroupsMembership_1 request. See section Set Permissioning Groups Membership (SetPermGroupsMembership_1) for more details.

46.4 Get Accounts by Company ID (GetAccountsByCompanyId_1)

The GetAccountsByCompanyId_1 request retrieves all account IDs for a particular company.

The following example retrieves all accounts for the company with Company Id '184'.

XML Sample Request - Retrieving Accounts by Company ID

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/UserInfoUpdate/UserInfoUpdate.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/08/08/webservices/rkd/
      UserInfoUpdate_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetAccountsByCompanyId_Request_1 xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/UserInfoUpdate_1">
      <CompanyID>184</CompanyID>
    </GetAccountsByCompanyId_Request_1>
  </Body>
</Envelope>
```

The response returns the following information:

XML Sample Response - Retrieving Accounts by Company ID

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/08/08/webservices/
      rkd/UserInfoUpdate_1/GetAccountsByCompanyId_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <GetAccountsByCompanyId_Response_1 xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/UserInfoUpdate_1">
      <Account>
        <AccountID>1914782</AccountID>
        <AccountName>API Ids</AccountName>
      </Account>
      <Account>
        <AccountID>1932634</AccountID>
        <AccountName>Developers</AccountName>
      </Account>
    </GetAccountsByCompanyId_Response_1>
  </Body>
</Envelope>
```




```

    <AccountID>1915525</AccountID>
    <AccountName>Operations</AccountName>
  </Account>
  <Account>
    <AccountID>105</AccountID>
    <AccountName>Reuters Employees</AccountName>
  </Account>
  <Account>
    <AccountID>873260</AccountID>
    <AccountName>Reuters Market Guide Employees</AccountName>
  </Account>
  <Account>
    <AccountID>1930582</AccountID>
    <AccountName>xCancelled</AccountName>
  </Account>
</GetAccountsByCompanyId_1>
</Body>
</Envelope>

```

Attribute	Description
AccountID	Identifies a particular company account.
AccountName	Shows name of the account.

46.5 Modify User (Modify_1)

The Modify_1 request modifies information for a particular user. It is possible to modify the following information:

- Login Name
- Last Name
- First Name
- Middle Name
- Name Prefix
- Name Suffix
- Job Role ID
- Job Title
- Division
- Mailing address

You can also add/remove the following information:

- e-mail address
- group(s)

Note: See section Create User (Create_1) for more details on user information.

The following example adds email address for the user with User ID '32018636'.

XML Sample Request - Modifying User Information

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/UserInfoUpdate/UserInfoUpdate.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/08/08/webservices/rkd/
      UserInfoUpdate_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <Modify_Request_1 xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/UserInfoUpdate_1">
      <UserID>32018636</UserID>
    </Modify_Request_1>
  </Body>
</Envelope>

```



```

    <CompanyID>30818</CompanyID>
    <EmailAdd>test.user@reuters.com</EmailAdd>
  </Modify_Request_1>
</Body>
</Envelope>

```

The response returns the following information:

XML Sample Response - Modifying User Information

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/08/08/webservices/
    rkd/UserInfoUpdate_1/Modify_1_Reply</Action>
    <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
  </Header>
  <Body>
    <Modify_Response_1 xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/UserInfoUpdate_1"/>
  </Body>
</Envelope>

```

46.6 Get User Information (GetUserInfo_1)

The GetUserInfo_1 request retrieves all the information about a particular user.

The following example retrieves all the information about the user with User ID '2130'.

XML Sample Request - Retrieving User Information

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://api.rkd.reuters.com/api/UserInfoUpdate/UserInfoUpdate.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2008/08/08/webservices/rkd/
    UserInfoUpdate_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <GetUserInfo_Request_1 xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/UserInfoUpdate_1">
      <UserID>2130</UserID>
      <CompanyID>184</CompanyID>
    </GetUserInfo_Request_1>
  </Body>
</Envelope>

```

Attribute	Description
UserID	Identifies the user.
CompanyID	Identifies the company.

The response returns the following information:

XML Sample Response - Retrieving User Information

```

<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <Action xmlns="http://www.w3.org/2005/08/addressing" mustUnderstand="1">http://www.reuters.com/ns/2008/08/08/webservices/

```



```

rkd/UserInfoUpdate_1/GetUserInfo_1_Reply</Action>
<RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</RelatesTo>
</Header>
<Body>
  <GetUserInfo_Response_1 xmlns="http://www.reuters.com/ns/2008/08/08/webservices/rkd/UserInfoUpdate_1">
    <AccountID>105</AccountID>
    <Enabled>1</Enabled>
    <LoginName>ky</LoginName>
    <Alias>Kathy.Pitel@Reuters.com</Alias>
    <LastName>Pitel</LastName>
    <FirstName>Kathy</FirstName>
    <MiddleName />
    <NamePrefix />
    <NameSuffix />
    <Group>
      <GroupID>18</GroupID>
      <GroupName>SS5-LEGAL</GroupName>
    </Group>
    <Group>
      <GroupID>30</GroupID>
      <GroupName>INTERNAL/ARCHIVE (R)</GroupName>
    </Group>
    <Group>
      <GroupID>31</GroupID>
      <GroupName>PPV RETAIL</GroupName>
    </Group>
    <ResearchCategory id="36" name="z - Reuters System Entities"/>
  </GetUserInfo_Response_1>
</Body>
</Envelope>

```

Attribute	Description
AccountID	Shows ID of user account.
Enabled	Defines whether the account is enabled.
LoginName	Shows user's login name. Sometimes it is referred to as "alias"; this should be the user's e-mail address.
LastName	Shows user's last name.
FirstName	Shows user's first name.
MiddleName	Shows user's middle name.
NamePrefix	Shows name prefix.
NameSuffix	Shows name suffix.
Group	Shows information about the group, which the user belongs to. • GroupID - shows ID of the user group. • GroupName - shows group name.
ResearchCategory	Shows the research groups the user is entitled to. Contains the following sub-values: • id - shows research group id. • name - shows the name of the research group.



chapter 47 Web Views

The TRKD API Web Views are designed to be used within clients' own internal portals by institutional users and external-facing portals by non-professionals. A client can customize/personalize their appearance using CSS (cascading style sheets). The TRKD API Web Views include the following components:

- **Quote Header**
 - o Providing a delayed or real-time quick snapshots of financial instruments including fundamentals and pricing data.
- **Snap Quote**
 - o Providing real-time or delayed Snap Quote detail on a particular financial instrument or chain, enabling a user to view a set of related instruments on a specific stock, all constituents of an index, delivery months of futures, spot rates and more.
- **QuoteList**
 - o Displays market data for multi-instrument and multi-field quote lists in a single request made by the user.
- **News Headlines & Stories**
 - o Provides lists of News Headlines based on the search input - RIC, topic, code, company, etc.
 - o Provides the News Story including live links to quotes and other News mentioned within the articles. Users also have the ability to print out the story in its entirety.
- **Charts**
 - o Providing Intraday/Interday time series charting. Full customization of the charts is possible through pre-defined skins and parameters.
- **Search**
 - o Making finding companies, stocks, indices, bonds or economic data quick and easy; picking between Organization and Country and/or Sector searches the view allows the user to search organizations and assets globally.
- **Consensus Estimates**
 - o Consisting of global consensus estimates for over 15,000 active and 10,000 inactive companies. It contains all estimate types/measures and periods available dependant on user subscription.
- **Summary Financials & Ratios**
 - o Meeting the demands of users who primarily intend to display or print information about publicly traded companies. The reports contain historical financial statements, estimated financials variables and a number of frequently used ratios.
- **Significant Developments**
 - o Cutting out the noise - a news analysis and filtering service that identifies crucial, market-moving company news on a near real-time basis for a large universe of public companies.
- **Online Reports**
 - o Delivering the latest ready-to-publish breaking news, with graphics and pictures organized by independent news category modules. Dedicated coverage of the topics that matter most to people, including environmental news, global markets and lifestyle news.
- **Lipper**
 - o A suite of standalone Lipper views as well as Search & Fund Overview views providing developers the ability to create their own fund outlook and overview pages and/or display a pre-canned version of the Fund Overview with all the most relevant fund information.
- **Street Events**
 - o Searching for economic events based on when they occur, and/or inclusion of that company in specific set of country codes.
- **Snapshot Views**
 - o Retrieving a company description, address, contact details, officer names and a limited number of financial ratios and estimates.
- **Screener**
 - o Fund Screener provides easy tools for finding funds on Lipper database and filtering companies by specific criteria.
 - o Equity Screener provides easy tools for screening companies based on filtering specific criteria.
- **Watchlist Editor**
 - o Allowing the users to create, edit and delete their own watchlist. The users can display their watchlists with specific fields they have chosen and see related content for each stock in their lists.
- **Country & Sector**
 - o Allowing the users to view a succinct summary of recent activity for a specific country or sector and to navigate to the related information.



47.1 Identifying the User

This chapter provides information on available authorization types and explains how to work with the TRKD API Web Views without cookies.

47.1.1 Authorizing Service Users

In order to use the TRKD Web Views the user needs to generate SessionID by passing the following URL in their browser to the authorization portal:

HTTP Sample Request

```
https://[views_server]/views/GetServiceSession.ashx?appid=[appID]&su=[serviceuser]&sp=[password]
```

Parameter	Description
[views_server]	The server where the TRKD Web Views service is installed, e.g.views.rkd.reuters.com.
[appID]	An application identification string (appid) is a short descriptive string that uniquely identifies user's application for tracking and entitlement purposes. Thomson Reuters assigns an appid during setup. Your application submits this appid with each API request.
[serviceuser]	A single credential that you can use for all users of your application and across non user-specific views. The user credential provides the appropriate entitlements (rights) to data from various services. For example, a credential may be limited to estimates from particular regions.
[password]	The password generated for the service user.

Note: The governing security requirement does not allow plain text passwords passed over the wire. All session creation must be made over **HTTPS**.

47.1.2 Authorizing Effective Users

The most common scenario is an application that supports individual user credentials (authorization through effective users) to personalize each users experience.

TRKD API supports two types of effective users, depending on the particular service you are using:

- **Reuters** - This type of effective user represents an identity created (through manual administration during setup of your application) and maintained in the Thomson Reuters user data store. Reuters type is the default effective user type.
- **Unmanaged** - This type of effective user represents an identity with no entry in the Thomson Reuters user data store. Your application is responsible for maintaining this user identity.

Effective user must specify the following URL to generate a sessionID:

HTTP Sample Request

```
https://[views_server]/views/GetEffectiveSession.ashx?appid=[appID]&su=[service_user]&sp=[password]&eu=[effective_user]&eut=Reuters
```

Parameter	Description
[views_server]	The server where the TRKD Web Views service is installed, e.g.views.rkd.reuters.com.
[appID]	An application identification string (appid) is a short descriptive string that uniquely identifies user's application for tracking and entitlement purposes. Thomson Reuters assigns an appid during setup. Your application submits this appid with each API request.
su	Service User - a single credential that you can use for all users of your application and across non user-specific views. The user credential provides the appropriate entitlements (rights) to data from various

	services. For example, a credential may be limited to estimates from particular regions.
sp	The password generated for the service user.
eu	Effective user credentials.
eut	Effective user type. Can be either Reuters or Unmanaged.

Note: The governing security requirement does not allow plain text passwords passed over the wire. All session creation must be made over **HTTPS**.

After users submit the URL in the browser:

HTTP Sample Request

```
https://views.rkd.reuters.com/views/getservicesession.ashx?appid=[appID]&su=username@company.com&sp=userPassword
```

They get the following XML response:

XML Sample Response

```
<RkdSession>
  <SessionID>c3fe91c7-e955-4a00-a408-4228d13d3fbe</SessionID>
  <Expiration>2010-08-05T20:42:59Z</Expiration>
</RkdSession>
```

Note: Tokens expire in 8 hours after generation moment. So, if it is generated at 10:14am EST you should see Expiration: 2010-07-01T23:14:05Z. Expiration time is shown in UTC (GMT+0). EST is a UTC-5. So 10 am -(-5) + 8 = 23 = 11pm.

Your portals must IFRAME links to TRKD frames without encoding session ID in query string, e.g.:

HTTP Sample Request

```
https://views.rkd.reuters.com/views/News/[appID]/Story.aspx?[p1n]=[p1v]
```

When no session is present for an end user, the portal establishes the session with TRKD API and redirects end user back to the view with the session ID encoded in the URL query string:

HTTP Sample Request

```
http://views.rkd.reuters.com/views/News/[appID]/NewsStory.aspx?sid=[session id]&[p1n]=[p1v]...
```

After TRKD API validates a sessionID passed on query string, it redirects the user back to the original Web View URL, but this time the user will be passing a cookie:

HTTP Sample Request

```
http://views.rkd.reuters.com/views/News/[appID]/NewsStory.aspx?[p1n]=[p1v]...
```

After users get their SessionID, they can use the TRKD Web Views by passing the URL to the required view and adding "&sessionid=" and their SessionID (in bold) at the end of the URL, e.g.:

HTTP Sample Request

```
http://views.rkd.reuters.com/views/search/[appID]/default.aspx?maxrec=1000&query=IBM&sessionid=c3fe91c7-e955-4a00-a408-4228d13d3fbe
```



After the browser saves the cookie (if it is configured to do so), the user can pass URL to any View without having to pass SessionID. The above URL is a search request to retrieve items where IBM is mentioned and is limited to 1000 results only.

Note: Request Builder gets SessionID for users automatically.

47.1.3 Working without Cookies

If you prefer, you can work with the TRKD Web Views without cookies. In that case you will need to specify SessionID to each TRKD Web View URL. To do so, you need to add "&usecookie=false" at the end of the URL, e.g.:

HTTP Sample Request
<pre>http://views.rkd.reuters.com/views/search/[appID]/default.aspx?maxrec=1000&query=IBM&sessionid=c3fe91c7-e955-4a00-a408-4228d13d3fbe&usecookie=false</pre>

47.2 Preference Configuration

The TRKD API Web Views allow developers and client administrators to define a number of 'cultural' parameters to be consistent for a given set of users. These preferences are outlined below and include preferences such as Language, CSS Version, Time Zone, Date format, Number format, and more.

The developer can also set up multiple different preference sets to use under a single service user ID to allow different groups of users to see data within the views tailored to their cultural preferences (Language, CSS Version, Time Zone, Date format, Number format, etc).

Each Preference Set includes the possibility to set the following options:

Parameter	Description
LANG	Language in which the Views will be shown. It must be specified in language-culture format, for example, en-US. Available values are: - English (en-US) - Chinese Simplified (zh-CHS) - Japanese (ja-JP)
CSS_VERSION	The version of the CSS file to be used for displaying Views. CSS styles can be defined by clients, but only TRKD Administrators can upload CSS files and activate them against user accounts. Contact the Online Solutions Team at Thomson Reuters to upload your files.
BASECSS_VERSION	Version of Base CSS file to be used for displaying Views. A Base_CSS is a style that is generated by Thomson Reuters. If the client needs to use the latest version - it is necessary to omit this parameter or specify zero (0).
TIMEZONE	The time zone used for displaying financial data. The TRKD API Web Views supports all standard time zones - e.g., for GMT the preference would read - 'GMT Standard Time'. See Standard Time Zones section for the list of standard time zones which can be used.
DATEFORMAT	The date format used for displaying financial data. Available values are: [0-31] [MONTH] [YYYY] - MM/DD/YYYY - DD/MM/YY - MM/DD/YY
TIMEFORMAT	The time format used for displaying financial data. E.g.: hh:mm:ss, etc.
NUMFORMAT	The number format used for displaying financial data. E.g.: 12,345.99.
USECOOKIE	Enables/disables use of cookies.

Note: TIMEZONE, DATEFORMAT, NUMFORMAT depend on the selected language-Culture parameter.

47.3 Client File Management Configuration

Users may determine that there is a necessity to customize the style sheet bundle which the TRKD API Web Views use so that the TRKD API Web Views will visually 'fit' into proprietary portals and web sites.

If you want to display the TRKD API Web Views as they are, then there is no need to modify any style sheets.

In case you want to align the Web Views with your corporate signatures, or use your own custom labels in the Web Views, you can download the CSS Toolkit from the Customer Zone. The CSS Toolkit comprises the following files:

- Base.css along with all other CSS files which control the Web Views
- Branding.css - by default this will be empty
- Html pages for each Web View
- Java script files
- Image files
- .resx files

The client is responsible for modifying the Branding.css style sheet to adhere to the client's visual signatures. Clients should only make changes to the Branding.css delivered in the CSS Tool Kit bundle; any changes made to the Base.css file will be overwritten by the system.

Clients should use the HTML pages delivered in the original bundle to test on-site whether their changes to the Branding.css are correct prior to sending the upload bundle back to Thomson Reuters for upload.

If you need to display Web Views labels in a language that has not yet been localized by Thomson Reuters, edit the .resx files. Open a .resx file containing the labels you want to modify (for example, Common.resx) with a text editor (for example, Notepad). Each label is described as a name/value pair:

```
<data name="HB_Currency" xml:space="preserve">
  <value>Currency</value>
</data>
```

Replace the values in <value> tags with new ones, translated into a proper language (French in our example):

```
<data name="HB_Currency" xml:space="preserve">
  <value>Devises</value>
</data>
```

Save the .resx file with the name reflecting its language and culture (for example, Common.fr-Fr.resx). You can translate labels to several languages. Add all the modified .resx files to the resx folder.

Client delivery of upload bundle (zip archive) should contain only the following folders (all or any):

- css (with Branding.css)
- img (with images)
- resx (with all .resx files translated by the user)

Uploading Resources Pages to the Support Portal

Only TRKD API Administrators can upload .css and .resx files for a client. Contact the Online Solutions team at Thomson Reuters to upload your files.

Once the agreement has been reached with the client and the TRKD Administrator verified the modified Style sheet is correct then the Administrator will 'activate' the CSS Version for production and change the preferences for the client ID(s) to use the correct CSS version.

After TRKD API Administrator activates your custom style sheet version, the application will apply that style to all Web Views that you call under the specified Service User ID and preference set.

To display the Web Views labels in different languages, use the LABEL_PACK and LANG parameters in your requests.

47.4 Library of TRKD API Web Views

The list of available TRKD API Web Views depends on user's subscription and permissions.

TRKD API provides access to the following Web Views:

Web View Name	URL Example

Header Banner	/views/quotes/[appID]/headerbanner.aspx?ric=[RIC]
Disclaimer	/views/Index/[appID]/disclaimer.aspx
Disclaimer (JP)	/views/Index/[appID]/disclaimer.aspx?lang=ja-JP
Quotes	/views/quotes/[appID]/default.aspx?ric=[RIC]
Quotes List	/views/quotelist/[appID]/default.aspx?rics=[RICs]
News	/views/news/[appID]/headlines.aspx?code=[RIC]
News Story	/views/news/[appID]/story.aspx?storyid=[storyID]
Charts	/views/charts/[appID]/default.aspx?rics=[RICs]
Search	/views/search/[appID]/default.aspx?query=[param1]&[param2]&etc
Significant Developments	/views/sigdev/[appID]/default.aspx?rics=[RIC]
Fundamentals	/views/fundamentals/[appID]/income.aspx?ric=[RIC]
Estimates	/views/estimates/[appID]/default.aspx?company=[RIC]
Online Reports	/views/onlinereports/[appID]/headlines.aspx?olr_topic=[topic_name]
Lipper*	/views/lipper/[appID]/overview.aspx?lipperid=[Lipper_ID]
Street Events*	/views/streetevents/[appID]/details.aspx?eventid=[eventid]
Snapshot Views*	/views/snapshot/[appID]/basicinfo.aspx?symbol=[RIC]
Screener*	/views/screener/[appID]/[type].aspx?scr_criteria=[screening_criteria]
Watchlist Editor	/views/watchlisteditor/[appID]/default.aspx
Country & Sector*	/views/countryandsector/[appID]/rates.aspx?currency=GBP

The parameters shown below are just examples and each Web View and the full list of parameters to use with it can be found further in this document in the corresponding sections.

Note: * - For details on all available Web Views please see the corresponding sections.

Developers can structure a URL call to a specific Web View by using the parameters defined in this document.

The following abstract URL describes how to do that:

HTTP Sample Request	
http://[views_server]/views/[view_name]/[appID]/[view_page].aspx[?param1=value1]&[param2=value2]&[paramN=valueN] [&sessionid=sessionid_value]	

The table provided below lists 'base' parameters which can be used by each view (where appropriate):

Parameter	Description
DISCLAIMER	Defines whether to display header banner with the View (True/False).
TRLOGO	Displays the relevant Thomson Reuters logo to the web view. The logos should be used in conjunction with the Thomson Reuters Branding Guidelines available on Thomson Reuters Customer Zone (Default is TRUE).
BASECURRENCY	Defines the currency to be used for displaying pricing information. By default the pricing information is displayed in native currency. If the basecurrency is sent in the call, the values in the views are all aligned to the specified currency. Note: This does not apply to Forex, Money Markets or Indices asset class instruments.
SESSIONID	Defines SessionID parameter.
PREFSET	Specifies the preference set to be used for the user.
FRAME_TO_TARGET	Defines the frame where a link will be opened.
LANG	Specifies the language for the meta data in the View. Available values are: - English (en-US) - Chinese Simplified (zh-CHS)



	Japanese (ja-JP) If you want the Views in other languages, you can translate labels and upload them via the Online Solutions Team. In this case use the LABEL_PACK parameter, and specify the LANG parameter in language-culture format, for example fr-FR (French), it-IT (Italian), es-ES (Spanish). You can use any culture names supported by the .NET Framework.
LABEL_PACK	Version of the custom labels pack to be used in the Web Views. Custom labels can be defined by clients, but only TRKD Administrators can upload resource files and activate them against user accounts. Contact the Online Solutions Team at Thomson Reuters to upload your files.
CSS_VERSION	Sets the CSS version to be used.
CUSTOMCSSNAME	Allows specifying a different css name to be used only for Quotes Lite and Online Reports Web Views.
BASECSS_VERSION	Sets the Base CSS version to be used.
TIMEZONE	Specifies the time zone the user wants to display data in, if it differs from the one specified in the Preference Set. See time zone codes provided in the Standard Time Zones section.
DATEFORMAT	Defines the date format the user wants to display data in, if it differs from the one specified in the Preference Set.
TIMEFORMAT	Defines the time format the user wants to display data in, if it differs from the one specified in the Preference Set.
NUMFORMAT	Defines the number format the user wants to display data in, if it differs from the one specified in the Preference Set.
USECOOKIE	Defines whether to use cookies for authentication (True/False).
PREF_EXCH	Specifies preferred exchange (f.e. NYS, LON). Is used for symbology resolution, if a Web View doesn't have a symbol resolution form, then this parameter will be used to define RIC of what Exchange to use.
SCRTOOLTIP_VERSION	Sets the Screener tool tip version to be used.
LNK_QUOTES_VIEW	Defines whether to show link to the Quotes Web View and define what types of Quotes Web View to display. Possible values are: default, enhanced, lite, lite2.
HIDE_BACK_LINK	Disables the Back link shown on most views.
DISABLE_LINKS	Is used for disabling certain links shown on views. The following values are available: - NONE - default behavior, all links available by default - ALL - disables all external links - QUOTES - disables quotes links (default, lite, enhanced) - QUOTES/LITE - disables quotes lite links - QUOTES/ENHANCED - disables enhanced quotes links - QUOTES/LITE NEWS/STORY - disables quotes lite and news story links - LIPPER - hides link to Fund detail view on name in Fund Screener - NEWS - hides links to other news stories for Retrieve Story - NEWS/STORY - hides links to other news stories for Retrieve Story - QUOTES NEWS - hides links to quotes and other news stories for Retrieve Story

Note: All parameters which are sent along with the Web View URL call to the TRKD Servers will override all preferences which are set for the user in that session instance.

Any pages which contain Thomson Reuters content in a Client applications should have at least one instance of the Thomson Reuters / REUTERS brand logos (<TRLOGO>) and Thin Disclaimer (<DISCLAIMER>) displayed in a prominent location, where visible, any time one or more of our views are located in the web page.

IN ADDITION TO THE ABOVE, THE FOLLOWING BRANDING IS REQUIRED FOR THE SPECIFIC CIRCUMSTANCES SET OUT BELOW:

A. PAGES THAT CONTAIN REUTERS-ONLY HEADLINES

The Reuters logo for Thomson Reuters media services must be displayed in a prominent position on the page, and in such a way that the logo is immediately visible when retrieving the headlines.

B. PAGES THAT CONTAIN REUTERS AND THIRD PARTY HEADLINES

Unless otherwise agreed with Reuters, each Reuters headline or group of Reuters headlines displayed must be attributed to Reuters - e.g. finish with "(REUTERS)".



C. PAGES THAT CONTAIN REUTERS NEWS STORIES

The Reuters logo must be displayed on the page in a prominent position, close to the top, and in such a way that the logo is immediately visible when retrieving the news stories. "(REUTERS)" must appear in the slug line (top line) of the news item.

D. REUTERS HEADLINES ON 3RD PARTY SITES (WHERE PERMITTED BY AGREEMENT)

Each Reuters headline or group of Reuters headlines displayed must be attributed to Reuters - e.g. finish with "(REUTERS)".

E. PAGES THAT CONTAIN SOLELY THOMSON REUTERS FINANCIAL DATA

The Thomson Reuters logo must be displayed on the page in a prominent position and in such a way that the logo is immediately visible when retrieving the data.

F. PAGES THAT CONTAIN BOTH THOMSON REUTERS FINANCIAL DATA AND THIRD PARTY FINANCIAL DATA

Each page containing Thomson Reuters data together with third party data must contain a notice "Selected data supplied by Thomson Reuters" in close proximity to the Thomson Reuters Content.

47.4.1 Index Web View

The Index Web View displays the list (library) of Web Views that are available for the authorized user with sample URL calls for each view. The image below is an example with several Web Views that Index Web View can contain:

[+] Expand All	
Header Banner	[+]
Disclaimer	[+]
Quotes	[+]
Quotes List	[+]
News	[+]
Charts	[+]
Search	[+]
Significant Developments	[+]
Fundamentals	[+]
Estimates	[+]
Online Reports	[+]
Lipper	[+]
Street Events	[+]
Snapshot Views	[+]
Screener	[+]
Watchlist Editor	[+]
Country & Sector	[+]

1.4.2.0



To get to the Index page a developer should:

1. Generate SessionID by making the following URL call:

HTTP Sample Request

```
https://views.rkd.reuters.com/views/GetServiceSession.ashx?appid=XXXXXX&su=YYYYYYY&sp=ZZZZZ
```

Note: Tokens expire in 8 hours after generation moment. So, if it is generated at 10:14am EST you should see Expiration: 2010-07-01T23:14:05Z. Expiration time is shown in UTC (GMT+0). EST is a UTC-5. So 10 am -(-5) + 8 = 23 = 11pm.

2. Use the retrieved SessionID and pass the following URL to the browser:

HTTP Sample Request

```
http://views.rkd.reuters.com/views/index/[appID]/default.aspx?sessionId=xxxxxxxxxxxxxxxxxxxxxxxx
```

47.4.2 Header Banner Web View

The Header banner view allows users to retrieve a quick view of the RIC with some quote and fundamentals information.

The following table specifies available input parameters for header banner view:

Parameter	Description
RIC	Reuters Instrument Code for the security to retrieve: RIC (including Chain RICs).
COMPANY	Company name.

To display Header banner, the developer should specify the following at the end of URL:

```
/views/quotes/[appID]/headerbanner.aspx?ric=[RIC]
```

where [RIC] - Reuters Instrument Code

Samples:

1. RIC search for Google:

HTTP Sample Request - RIC Search for Google

```
http://views.rkd.reuters.com/views/quotes/[appID]/headerbanner.aspx?ric=GOOG.O
```

The developer will get the following Web View as a result:



2. RIC search for IBM:

HTTP Sample Request - RIC Search for IBM

```
http://views.rkd.reuters.com/views/quotes/[appID]/headerbanner.aspx?ric=IBM.N
```

The application will display the following as a result:

International Business Machines Corp.	147.85 ▲	0.21	0.14%	292928	10:11 11 January 2011	USD	IBM.N
Sector: IT Services & Consulting Industry: Technology	Stock Price	Change	Percent	Volume	Time Date	Currency	RIC

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3. RIC Search for Dow Jones Chain (returns no data)

HTTP Sample Request - RIC Search for Dow Jones Chain

```
http://views.rkd.reuters.com/views/quotes/[appID]/headerbanner.aspx?ric= 0%23.DJI
```

The application will display the following as a result:

DJ INDUSTRIAL	NA	NA	NA%	NA	NA	NA	USD	0#.DJI
Sector: NA Industry: NA	Stock Price	Change	Percent	Volume	Time	Date	Currency	RIC

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Note: If RIC is not found/supported/classed as company RIC you will get the following message:

Non-Company RIC type - RIC Not Supported	NA	NA	NA%	NA	NA	NA	NA	NA
Sector: NA Industry: NA	Stock Price	Change	Percent	Volume	Time	Date	Currency	RIC

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47.4.3 Disclaimer Web View

To ensure attribution is given to Thomson Reuters for the data included in the views, clients are required in certain circumstances (which will be explained at agreement time) to show a disclaimer on their web site.

The Thin disclaimer, as explained in the preceding section, should be displayed inside the view where appropriate. The full disclaimer should be displayed to the user if the hyperlink is clicked upon by the user.

To display full Disclaimer, the developer should specify the following at the end of URL:

```
/views/[appID]/index/disclaimer.aspx
```

HTTP Sample Request

```
http://views.rkd.reuters.com/views/index/[appID]/disclaimer.aspx
```

The developer gets the following in the response:



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Republication or redistribution of Thomson Reuters content, including by framing or similar means, is prohibited without the prior written consent of Thomson Reuters. Thomson Reuters' and the Thomson Reuters logo are registered trademarks and trademarks of Thomson Reuters and its affiliated companies.

For additional information on other Thomson Reuters Services please visit the Thomson Reuters public web site
<http://www.thomsonreuters.com/>

Note: To display full Disclaimer in Japanese, the developer should specify the following at the end of URL:

`/views/index/[appID]/disclaimer.aspx?lang=ja-JP`

47.4.3.1 Thin Disclaimer Web View

To ensure attribution is given to Thomson Reuters for the data included in the Web Views, as per the client agreement for the data, clients may be required to show a disclaimer on their web site.

By default the parameter DISCLAIMER is set to "DISCLAIMER=TRUE".

As per the client agreement for the data, this disclaimer should be rendered in the view at all times if the exchange permissions which the user has calls for Thomson Reuters Attribution.

Disclaimer should be placed at the bottom/middle of the views.

To display thin Disclaimer in a view (Center/Bottom alignment), the developer should specify the following at the end of URL:

`/views/index/[appID]/thindisclaimer.aspx`

HTTP Sample Request

`http://views.rkd.reuters.com/views/index/[appID]/thindisclaimer.aspx`

The developer will get the following Web View as a result:



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© Thomson Reuters Limited. [Click for restrictions.](#)

47.4.4 Quotes Web View

The Quote Web View allows you to retrieve snap quote or quote chain information. TRKD API delivers snap prices only. Streaming pricing data is not delivered in the TRKD API Web Views.

By default, TRKD API provides delayed stock prices. However, if your organization has an agreement within an exchange to provide its prices in real-time, then real-time snap prices can be delivered by TRKD API for that exchange.

An instrument is identified by a RIC (Reuters Instrument Code). Each RIC has a series of explicit fields that contain different items of information (for example, today's high price, traded volume, etc.). Not all instruments contain the same fields, and the fields are not always returned in the same order. This depends on the type of financial instrument and its asset class (for example, stock, index, FX rate, fund, etc.).



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Full details of the asset classes and the fields (FIDs) that are displayed for each Web View are provided in the "TRKD API Web Views: AssetClass field mappings for Snap Quote View" document located here:
<https://customers.reuters.com/a/support/paz/pazDocs.aspx?dId=436066>.

The table below specifies available input parameters for quote input:

Parameter	Description
ALLFIELDS	(Optional) Defines whether to display the All Fields section.
CHART_LINK	(Optional) Defines whether to display the link to the chart for the specified RIC, if available.
COLUMN3	(Optional) Defines whether to display the retrieved quotes data in three columns. By default, the data is split into two columns.
COMPANY	(Optional) Parameter used for symbol resolution. It means you can specify 3rd-Party symbols and the application will resolve them to RICs.
NEWS_LINK	(Optional) Defines whether to display the link to the news headlines for the specified RIC, if available.
PAGE	(Optional) Valid for Quote chains only. Defines what page number to display.
RIC	Reuters Instrument Code for the security to retrieve (including Chain RICs).
SID	(Optional) Cache key used for paging.

To make request for the quote data, the developer should specify the following at the end of URL:

```
/views/quotes/[appID]/default.aspx?ric=[RIC]&[column3=true/false]&[ALLFIELDS=true/false]&[chart_link=true/false]&[company=company_name]&[news_link=true/false]&[page=pagenumber]&[sid=sid_value]&[sessionid=sessionid_value]
```

HTTP Sample Request

```
http://views.rkd.reuters.com/views/quotes/[appID]/default.aspx?ric=IBM.N&column3=true&TRLOGO=true
```

You will get the following Web View as a result:

INTL BUS MACHINE - IBM.N

Charts | News

Field	Value	Field	Value	Field	Value
Name	INTL BUS MACHINE	Ask	176.3	Yield	1.69
Last Price	176.27	Ask Size	2	Earnings	11.92
Trade Time	09:59	Opening Price	176.79	Dividend	3
Trade Date	2011/07/07	Daily High	177.25	Dividend Date	2011/06/10
Net Change	-1.44 ↓	Daily Low	176.27	Ex Div Date	2011/05/06
% Change	-0.81% ↓	Previous Close	177.71	P.E.	14.91
Volume	392719	Hist Close Date	2011/07/06	Year's High	177.76
Bid	176.22	Currency	USD	Year's Low	122.18
Bid Size	2	Exchange	NYS		

All Fields ▾
Updated 2011/07/07 10:00

Data source realtime



To search for MSFT quotes and display them in two-column format and exclude link to news data, you must construct the URL in the following way:

HTTP Sample Request - Searching for Microsoft Quotes

```
http://views.rkd.reuters.com/views/quotes/[appID]/default.aspx?ric=MSFT.O&news_link=false&TRLOGO=true
```

As a result, you will get the following:

MICROSOFT CP - MSFT.O

Charts | News

Field	Value	Field	Value
Name	MICROSOFT CP	Daily Low	26.36
Last Price	26.7	Previous Close	26.33
Trade Time	10:02	Hist Close Date	2011/07/06
Trade Date	2011/07/07	Currency	USD
Net Change	0.37 ↑	Exchange	NSQ
% Change	1.39% ↑	Yield	2.43
Volume	11620331	Earnings	2.52
Bid	26.69	Dividend	0.64
Bid Size	231	Dividend Date	2011/09/08
Ask	26.7	Ex Div Date	2011/08/16
Ask Size	272	P.E.	10.43
Opening Price	26.49	Year's High	29.46
Daily High	26.7	Year's Low	23.32

All Fields ▾

Updated 2011/07/07 10:02

Data source realtime



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47.4.4.1 Quote Chain Web View

A quote chain provides summary price information for a series of related instruments, such as all the constituents of the FTSE 100 Index, or the highest net gainers of the day on NASDAQ. Most quote chain RICs begin with "0#".

The number of instruments in a chain, the order of instruments and the position of any particular instrument, are not always constant and cannot be relied upon. They are often modified to reflect changing market conditions and may also differ between markets.

The picture below gives an example of chain RICs retrieved:



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FTSE 100 INDEX - 0#.FTSE

RIC	Name	Last Price	Trade Time	Trade Date	Net Change	% Change		
.FTSE	FTSE 100 INDEX	6052.53	08:48	2011/07/07	49.61 ↑	0.83% ↑		

RIC	Name	Turnover	Turnover Scale	Num Advancing	Num Declining	Num Unchanged	Time Of Update
.AD.FTSE	FTSE 100 Index	0		79	18	5	08:47

RIC	Name	Last Price	Trade Time	Trade Date	Net Change	% Change	Volume	Previous Close
AAL.L	ANGLO AMERICAN	3185.5	08:48	2011/07/07	69.5 ↑	2.23% ↑	1522196	3116
ABF.L	ASSOC.BR.FOODS	1080	08:48	2011/07/07	-1 ↓	-0.09% ↓	247766	1081
ADML.L	ADMIRAL GROUP	1647	08:47	2011/07/07	17 ↑	1.04% ↑	97500	1630
AGGK.L	AGGREKO	2009	08:48	2011/07/07	19 ↑	0.95% ↑	213612	1990
AMEC.L	AMEC	1117	08:45	2011/07/07	10 ↑	0.9% ↑	162381	1107
ANTO.L	ANTOFAGASTA	1466	08:47	2011/07/07	29 ↑	2.02% ↑	778980	1437
IPR.L	INTL POWER	311.3	08:48	2011/07/07	1.1 ↑	0.35% ↑	5879929	310.2
ISA.L	INMARSAT	570	08:47	2011/07/07	8 ↑	1.42% ↑	514901	562

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Updated 2011/07/07 08:48

Data source realtime

**Note:**

- In the Chain Quote views the RICs included in the chain are grouped into the same asset class.
- Specific FIDs are displayed for each asset class - this gives the user a better view of the chain RICs.

If you want to search for FX Quote Chain then you must submit the following request:

HTTP Sample Request - Searching for FX Quote Chain

```
http://views.rkd.reuters.com/views/quotes/[appID]/default.aspx?ric=FX%3dX&TRLOGO=true
```

As a result, you will get something like this:

SNAPSHOT SPOTS - FX=X

RIC	Name	Bid	Ask	Trade Time	Daily High	Daily Low
AED=X	UAE Dirham	3.67	3.67	08:02	3.67	3.67
LRD=X	Liberian Dollar	72.5	73.5	20:00	72.5	73.5
ANG=X	Nth Antil Guilder	1.75	0	07:01	1.76	1.8
LYD=X	LIBYAN DINAR	1.21	1.22	08:39	1.21	1.22
ARS=X	Argentine Peso	4.1	4.1	07:01	4.1	4.1
MDL=X	MDL=X	11.43	11.51	02:49	11.43	11.51
AUD=X	Australian Dollar	1.07	1.07	08:39	1.08	1.07
MGA=X	Malagasy Ariary	1950	1965	03:40	1950	1962
CLP=X	Chilean Peso	463.5	463.8	08:39	463.55	463.5
PEN=X	Peru Nuevo Sol	2.75	2.75	16:22	0	0
CNY=X	Chinese Yuan	6.46	6.46	08:05	6.47	6.46

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Updated 2011/07/07 08:42

Data source realtime



THOMSON REUTERS

47.4.4.2 Lite Quote View

Lite Quote Views are a lite version of Quotes Web Views. They can take the same parameters but differ by smaller font size, compact field sizes and display current Exchange state.

To request Lite Quote View for IBM, submit the following request:

HTTP Sample Request - RIC search for IBM - (Lite Quote View)

[http://views.rkd.reuters.com/views/quotes/\[appID\]/lite.aspx?ric=IBM.N](http://views.rkd.reuters.com/views/quotes/[appID]/lite.aspx?ric=IBM.N)

You will get the following as a response:

INTL BUS MACHINE (NYS: IBM.N)

165.68 ↓ 0 (0%) – Market: After Hours

[Charts](#) [News](#)

Last Price	165.68	Daily High	0
Traded Date & Time	22 June 2011 16:00	Daily Low	0
Change	0 (0%) ↓	Volume	0
Previous Close	165.68	Mkt Capitalization	0
Opening Price	0	P.E.	13.9
Bid	0	Earnings	11.92
Ask	0	Yield	1.81 / 3

Data source realtime



THOMSON REUTERS

To get Lite Quote View for the FTSE 100 Index, submit the following request:



THOMSON REUTERS

HTTP Sample Request - RIC search for Chain RIC (0#.FTSE) - (Lite Quote View)

[http://views.rkd.reuters.com/views/quotes/\[appID\]/lite.aspx?ric=0#.FTSE](http://views.rkd.reuters.com/views/quotes/[appID]/lite.aspx?ric=0#.FTSE)

You will receive the following response:

FTSE 100 INDEX - 0#.FTSE

Market: Open

RIC	Name	Last Price	Change	Day's Range	Traded Date & Time	
.FTSE	FTSE 100 INDEX	5688.17	-84.82 (-1.47%)	5686.35 / 5772.99	23 June 2011 08:40	

RIC	Name	Turnover	Turnover Scale	Num Advancing	Num Declining	Total Iss Trade	Vol Total
.AD.FTSE	FTSE 100 Index	0		5	97	102	0

RIC	Name	Last Price	Change	Previous Close	Volume	Traded Date & Time	
AAL.L	ANGLO AMERICAN	2820	-95 (-3.26%)	2915	2227625	23 June 2011 08:40	
ABF.L	ASSOC.BR.FOODS	1084	11 (1.03%)	1073	598064	23 June 2011 08:40	
ADML.L	ADMIRAL GROUP	1648	-18 (-1.08%)	1666	192353	23 June 2011 08:38	
AGGK.L	AGGREKO	1825	-37 (-1.99%)	1862	272906	23 June 2011 08:40	
AMEC.L	AMEC	1086	-13 (-1.18%)	1099	799033	23 June 2011 08:37	

ISA.L	INMARSAT	573.5	-8 (-1.38%)	581.5	1246598	23 June 2011 08:40	

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Data source: realtime



To request Thomson Reuters Information Speed Guide, you need to submit the following request:

HTTP Sample Request - RIC search for Speed Guide - (Lite Quote View)

[http://views.rkd.reuters.com/views/quotes/\[appID\]/lite.aspx?ric=THOMSONREUTERS](http://views.rkd.reuters.com/views/quotes/[appID]/lite.aspx?ric=THOMSONREUTERS)

The application will return the following response:



THOMSONREUTERS

```

WELCOME TO THE SPEED GUIDE TO THOMSON REUTERS INFORMATION      THOMSONREUTERS
This guide will help you find the most important data from Thomson Reuters. To
see any page, double-click on its code in < > or [ ] brackets.

=FINDING DATA BY MARKET=====
Equities.....<EQUITY>
Fixed Income.....<BONDS>
Money and Forex.....<MONEY>
News for all Markets.....<NEWS>
Derivatives.....<DERIV>
Commodities.....<COMMOD>
Energy.....<ENERGY>
Shipping.....<SHIPPING>
Property.....<PROPERTY>
Islamic.....<ISLAMIC>
Central Bank Overview.....<CBOVERVIEW>
All Markets in Chain Format.<0#REUTERS>

=CHANGE NOTIFICATIONS & ALERTS=====
Scheduled Change Notifications<CHANGES>
Service Alerts.....<ALERT>
=====
Reuters and Telerate.....<1>
Guides.....<SPEED/GUIDE1>Lost?
Contact Thomson Reuters Support.....<HELP>

=EURO INFORMATION=====
Guide to all Reuters Euro Data...<EURO>
=FINDING DATA BY COUNTRY/AREA=====
Finding Data by Country.....<COUNTRIES>
Emerging Markets.....<EMERGING>
Global Contributions.....<CONTRIBUTIONS>
Global Futures.....<FUTURES>
Global Options.....<OPTIONS>
Economic Content.....<ECONOMY>
=THIRD PARTY DATA=====
Specialist Data.....<SPECIAL>
Broker Data.....<BROKER>
=FINDING NEW DATA=====
Information on new/changed data..<DATA>
=BACKGROUND INFORMATION=====
Background Info.....<BACKGROUND>
Courses/Training .....<TRAINING>
=====
Reuters Messaging.....<MESSAGING>
Selective Access.....<USER/HELP>

```



47.4.4.3 Lite Quote View 2

Lite Quote View 2 is another version of the lite version of Quotes Web Views. It differs from it only by custom CSS that is used to display the Lite Web View.

To request Lite Quote View for IBM in grey color, submit the following request:

HTTP Sample Request - RIC Search for IBM (Cooper Design Grey View)

```
http://views.rkd.reuters.com/views/quotes/[appID]/lite2.aspx?ric=IBM.N&customcssname=customgrey
```

You will get the following as a response:

INTL BUS MACHINE (NYS: IBM.N)			
Market: After Hours 191.53 ↓ -1.09 (-0.57%)			
			Charts News
Last Price	191.53	Daily High	193.3
Traded Date & Time	02 February 2012 16:01	Daily Low	191.34
Change	-1.09 (-0.57%) ↓	Volume	1300631
Previous Close	192.62	Mkt Capitalization	0
Opening Price	192.82	P.E.	14.64
Bid	191.55	Earnings	13.08
Ask	191.56	Yield	1.57 / 3
Data source realtime			
 THOMSON REUTERS			

To request Lite Quote View for IBM in blue color, submit the following request:

HTTP Sample Request - RIC search for Chain RIC (0#.FTSE) - (Lite Quote View)

[http://views.rkd.reuters.com/views/quotes/\[appID\]/lite2.aspx?ric=IBM.N&customcssname=custom](http://views.rkd.reuters.com/views/quotes/[appID]/lite2.aspx?ric=IBM.N&customcssname=custom)

You will receive the following response:

INTL BUS MACHINE (NYS: IBM.N)			
Market: After Hours 191.53 ↓ -1.09 (-0.57%)			
			Charts News
Last Price	191.53	Daily High	193.3
Traded Date & Time	02 February 2012 16:01	Daily Low	191.34
Change	-1.09 (-0.57%) ↓	Volume	1300631
Previous Close	192.62	Mkt Capitalization	0
Opening Price	192.82	P.E.	14.64
Bid	191.55	Earnings	13.08
Ask	191.56	Yield	1.57 / 3
Data source realtime			
 THOMSON REUTERS			

47.4.4.4 Enhanced Quote View

The Enhanced Quote Web View allows the developer to customize what content is returned to their users:

- define the FIDs which they want to display for instrument quotes;
- visually identify the more important fields in their quote display by assigning different fonts, sizes and colors;
- group relative fields;
- display multiple fields on one line;
- include a Sparkline chart inside a single block of data items;



- add a 52 week range of price with a pointer indicator to show the current price;
- include exchange status information on the quote view;
- display fundamentals data fields in the quote view;

The full list of fundamentals fields available can be found in TRKD Web Views Enhanced Quotes and Country Sector Data Guide.

The Enhanced Quote View also shows tooltips with a detailed description for the field being hovered upon. If you hover upon a sparkline, the application displays the chart and the 52 week range indicator shows Last, High and Low values.

The table below specifies available input parameters for enhanced quote view:

Parameter	Description
CHART_LINK	(Optional) Defines whether to display the link to the chart for the specified RIC, if available.
COMPANY	(Optional) Parameter used for symbol resolution. It means you can specify 3rd-Party symbols and the application will resolve them to RICs.
FIDS_FORMA T	Defines list of FIDs to include in each block. The tier display of each FID is recognized by 'CHAR' value e.g., XXX;1 XXX;2 XXX;3 Examples • FIDS_A1=CF_LAST;1 NETCHNG;2 QoS;3 • FIDS_B2=BID;3 ASK;3 • FIDS_A4=OPEN;3 HIGH;3 LOW;3 CLOSE;3
FUND2_LINK	(Optional) Defines whether to display the link to the financial statements views for the specified company, if available.
NEWS_LINK	(Optional) Defines whether to display the link to the news headlines for the specified RIC, if available.
PAGE	(Optional) Valid for Quote chains only. Defines what page number to display.
PERIODBAS IS	Defines the reporting basis. Either Annual or Interim for financial statements.
RIC	Reuters Instrument Code for the security to retrieve (including Chain RICs).
SID	(Optional) Cache key used for paging.
SPARK_RAN GE_END	End of Range of time the sparkline should draw history of price: SPARK_RANGE_END=FID_A0=05/22/2010;FID_A2=05/22/2010 or SPARK_RANGE_START=05/22/2010
SPARK_RAN GE_START	Start of Range of time the spark line should draw history of price. It is possible to generate several sparklines, so syntax for this parameter provided below: SPARK_RANGE_START=FID_A0=05/22/2008;FID_A2=05/22/2009 or SPARK_RANGE_START=05/22/2008
SYMBOL_DIS PLAY	Parameter to define the SYMBOL type which will be displayed in the header area of the Quote View and QuoteList view. Possible values: RIC, TICKER, CUSIP, SEDOL, ISIN (all 3rd party identifiers require permissions).
TITLE	Allows user to define a title to add to the view. Default OFF will always display Full Company name, RIC and Exchange name.

To see a 52 Week range and price pointer one of the cells should contain 52wk. Please keep in mind that you can't combine this with other content in the same cell, so the cell should contain ONLY 52wk if you want to display 52 week range and price pointer.

To see a sparkline one of the cells should contain sparkline. If it is not there then the graph will not be displayed. In addition to that you must not forget to set the start and end dates for sparklines. Make sure you don't combine this with other content within the same cell; otherwise sparkline will not be displayed.

To group fields together you must use the following syntax:

[and]

Example: [High and Low]

To show the field value without the label you can use { and } to mark Field Names.

Example: [{HIGH_1}]/[{LOW_1}]

You can add a digit at the end of the field expression to specify the font size. For example:



[High and Low]:[{HIGH_1}/{LOW_1}]:3
 or
 [Last Price]:[{CF_LAST}]:1

'1' will use the biggest font size available.

Sample Requests

1. Simple Enhanced Web View

To display a simple enhanced web view, the developer should specify the following URL:

Simple Enhanced Web View Request

```
http://views.rkd.reuters.com/views/quotes/[appID]/enhanced.aspx?ric=IBM.N
```

The application will display the following web view:



2. Enhanced Web View with Specified FIDs

To display only specific FIDs on an enhanced web view, the developer should specify the following URL:

Enhanced Web View with Specified FIDs Request

```
http://views.rkd.reuters.com/views/quotes/[appID]/enhanced.aspx?ric=IBM.N&fids_format=FIDS_A1%3dCF_ASK|CF_BID|CF_DATE;  

FIDS_A2=CF_LAST|PERATIO|YRHIGH
```

The application will display the following web view:

[Charts](#) | [News](#)

INTL BUS MACHINE (IBM.N)	
NYS: After hours: opens in 2h 41m	
Ask	186.85
Bid	186.84
Trade Date	13 October 2011
Last Price	186.82
P.E.	15.22
Year's High	188

Data source realtime



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3. Enhanced Web View with Fundamentals

To display fundamentals data on a enhanced web view, the developer should specify the following URL:

Enhanced Web View with Fundamentals Request

```
http://views.rkd.reuters.com/views/quotes/[appID]/enhanced.aspx?ric=IBM.N&fids_format=FIDS_A1%3dfund_NPRICE|fund_NHIG|fund_NLOW%3bFIDS_A2%3dfund_TTMGROSMGN|fund_TTMNPMGN|fund_REVCHNGYR%3bFIDS_B1%3dfund_SREV|fund_RTLLR|fund_SCOR%3bFIDS_B2%3dfund_ADEP|fund_APPN|fund_AGWI%3bFIDS_C1%3dfund_ONET|fund_SDED|fund_SAMT
```

The application will display the following web view:

[Charts](#)
[News](#)

INTL BUS MACHINE (IBM.N)

NYS: After hours: opens in 2h 36m

Price - closing or last bid	186.82	Revenue	99871	Net Income/Starting Line	14833
Price - 12 month high	188	Total Revenue	99870	Depreciation/Depletion	3657
Price - 12 month low	136.7	Cost of Revenue, Total	53857	Amortization	1174
Gross Margin - trailing 12 months	46.36	Accumulated Depreciation, Total	-26193		
Net Profit Margin % - trailing 12 months	14.7	Property/Plant/Equipment, Total - Net	14096		
Revenue Change % - most recent quarter 1 year ago	12.4	Goodwill, Net	25136		

Data source realtime



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4. Simple Enhanced Web View with Sparkline and 52 week range

To display fundamentals data on a enhanced web view, the developer should specify the following URL:

Simple Enhanced Web View with Sparkline and 52 Week Range Request

```
http://views.rkd.reuters.com/views/quotes/[appID]/enhanced.aspx?ric=IBM.N&fids_format=FIDS_A1%3dfund_NPRICE|fund_NHIG|fund_NLOW%3bFIDS_A2%3dfund_TTMGROSMGN|fund_TTMNPMGN|fund_REVCHNGYR%3bFIDS_B1%3dfund_SREV|fund_RTLLR|fund_SCOR%3bFIDS_B2%3dfund_ADEP|fund_APPN|fund_AGWI%3bFIDS_C1%3dfund_ONET|fund_SDED|fund_SAMT
```

The application will display the following web view:



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5. Enhanced Web View with Most Features

To make request for the enhanced quote view with most features enabled, the developer should specify the following URL:

Enhanced Web View with Most Features Request

```
http://views.rkd.reuters.com/views/quotes/[appID]/enhanced.aspx?title=Main+quotes+with+sparkline+and+52wk+range+for+IBM&ric=IBM.
N&fids_format=
FIDS_A1%3ddline_last%3a1%7cline_NETCHNG%3a2%7cCF_DATE%3a3%3bFIDS_A2%3dgroup_main_quotes%3bFIDS_A3%3ddline_years_range
%3a3%7cCF_VOLUME%3a3%3b
FIDS_A4%3dgroup_ask_bid%3bFIDS_B1%3dgroup_dividend%3bFIDS_B2%3dPERATIO%3a3%7cYRHIGH%3a3%7cYRLOW%3a3%
3bFIDS_C1%3dsparkline%3bFIDS_C2%3d52wk#
```

You will get the following Web View as a result:

Main quotes with sparkline and 52wk range for IBM

Charts | News



47.4.5 QuoteList Web View

The QuoteList Web View lets you retrieve prices on multi-instrument and multi-field quote lists in a single request. User can send a list of the instruments (RICs) and the fields (FIDs) to the Web Views server, and the latest available information for the instruments is returned in the corresponding format.

A QuoteList may contain any of the following types of instrument:

- exchange-traded stocks (for example: RIC VOD.L)
- indices (for example: RIC .DJI)
- exchange warrants (for example: RIC CH1031161.S)
- exchange bonds (for example: RIC CH1037959=S)
- bonds (for example: RIC US30YT=RR)
- exchange funds (for example: RIC SWBZ.S)
- foreign exchange (for example: RIC CHF=X)

Note: If set, then the BASECURRENCY parameter is applied across all asset classes apart from Forex, Money Market or Indices Instruments asset classes.

The table below specifies available input parameters for the QuoteList input:

Parameter	Description
ALLNEWS_LINK	(Optional) Defines whether to display the link to 'All news' stories for all RICS entered into the call string.
COMPANIES	(Optional) Allows the users to use symbol resolution .
ERROR	(Optional) TRUE / FALSE. If set to FALSE - the application will display only available/identifiable RICS in the rendered view. If set to TRUE - the application will display available/identifiable RICS and notify the user about invalid RICS at the bottom of the rendered view.
FIELDS	(Optional) Defines whether to display the retrieved quotes data in three columns. By default, the data is displayed in a two column table. The default fields displayed when no others are sent in the call are: • CLOSE (FID=CF_CLOSE) • BID (FID=CF_BID) • ASK (FID=CF_ASK) • LAST (FID=CF_LAST) • NETCHNG (FID=CF_NETCHNG) • PCTCHNG (FID=CF_PCTCHNG) • VOLUME (FID=CF_VOLUME) • CURRENCY (FID=CF_CURRENCY) • TRADE_DATE (FID=CF_TRADE_DATE) • TRDRIM_1 (FID=CF_TRDTIM_1)
RICS	List of Reuters Instrument Codes to retrieve (including Chain RICS). Note: Use vertical line () to specify several RICS (e.g. RR.L IBM.N). To override RIC display name(s) user should pass additional information in RIC field. E.g.: ?RICS=IBM.N, International Business Machines
TITLE	(Optional) Displays the specified title of the QuoteList.
WATCHLIST	(Optional) Defines the 'watchlist' to use as the set of companies in the Quote List.

To make request for the QuoteList Web View, the implementer should specify the following at the end of URL:

```
/views/[appID]/quotelist/default.aspx?rics=[RIC][?fields=field1|field2|fieldN][&title=value][&allnews_link=link][&error=value]
[&sessionid=sessionid_value]
```

HTTP Sample Request

```
http://views.rkd.reuters.com/views/quotelist/[appID]/default.aspx?rics=IBM.N&sessionid=2ae56598-0455-4d06-8c67-269b4ff1c8a5&usecookie=false
```

The user will get a QuoteList Web View similar to this:



All News

Name	Last Price	Previous Close	Net Change	% Change	Bid	Ask	Volume	Currency	Trade Date	Trade Time
INTL BUS MACHINE	176.27	177.71	-1.44 ↓	-0.81% ↓	176.23	176.29	414265	USD	2011/07/07	10:08

Last updated 2011/07/07 10:08



THOMSON REUTERS

To request Quote list for IBM, GOOG and MSFT with a name change for IBM and default fields display, you must construct the following URL:

HTTP Sample Request - Quote List for IBM, Google and Microsoft with Default Fields and Changed Name for IBM

[http://views.rkd.reuters.com/views/quotelist/\[appId\]/default.aspx?rics=IBM.N,International Business Machines\[GOOG.O\]MSFT.O&title=IBM,Microsoft&Google](http://views.rkd.reuters.com/views/quotelist/[appId]/default.aspx?rics=IBM.N,International Business Machines[GOOG.O]MSFT.O&title=IBM,Microsoft&Google)

This will return the following Web View:

IBM,Microsoft&Google

All News

Name	Last Price	Previous Close	Net Change	% Change	Bid	Ask	Volume	Currency	Trade Date	Trade Time
International Business Ma...	176.37	177.71	-1.34 ↓	-0.75% ↓	176.35	176.4	409810	USD	2011/07/07	10:06
GOOGLE	538.52	535.36	3.16 ↑	0.59% ↑	538.5	538.65	694586	USD	2011/07/07	10:06
MICROSOFT CP	26.66	26.33	0.33 ↑	1.23% ↑	26.65	26.66	12150288	USD	2011/07/07	10:06

Last updated 2011/07/07 10:06



THOMSON REUTERS

To request Quote list for 3M, GE, IEP and Textron with specified Fields to display, you must construct the following URL:

HTTP Sample Request - Quote List for 3M, GE, IEP and Textron

[http://views.rkd.reuters.com/views/quotelist/\[appId\]/default.aspx?rics=MMM.N%7cGE.N%7cIEP.N%7cTXT.N&fields=HST_CLOSE%7cNETCHNG_1%7cHIGH_1%7cLOW_1&title=Custom+QuoteList](http://views.rkd.reuters.com/views/quotelist/[appId]/default.aspx?rics=MMM.N%7cGE.N%7cIEP.N%7cTXT.N&fields=HST_CLOSE%7cNETCHNG_1%7cHIGH_1%7cLOW_1&title=Custom+QuoteList)

This will return the following Web View:

Custom QuoteList

All News

Name	Historic Close	Net Change	Today's High	Today's Low
3M COMPANY	97.24	0.27 ↑	97.81	97.25
GENERAL ELEC CO	19.05	0.16 ↑	19.27	19.14
ICAHN ENTPR L P	43.73	0.4 ↑	44.13	44.13
TEXTRON INC	22.63	0.42 ↑	23.1	22.87

Last updated 2011/07/07 10:10



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The list of available Fields (FIDs) for the QuoteList can be found in the TRKD Data Guide on the Customer Zone at the following link:

<https://customers.reuters.com/a/support/paz/pazDocs.aspx?dId=379957>



THOMSON REUTERS

Consolidated Fields

Some RICs can have the same data in different fields as well as across multiple exchanges.

For example, bid price for some RICs can be specified as BID_1, BID or BID_2.

To consolidate the data TRKD team has created Consolidated fields (CF_). A CF_ field will serve as a universal field for all types of RICs. For example, for bid price it will be CF_BID.

You can find the supported CF_ FIDs in the TRKD API Data Guide.

47.4.6 News Web View

The News Web Views set allows the user to retrieve a list of news headlines and an individual news story.

The table provided below lists all available parameters which can be used for calling the News Headlines Web View:

Parameter	Description
ATTRIBUTIONS	(Optional) Specifies to return news written by specific source(s).
ATTRIBUTIONSOP	Values="or,and,andnot". The parameter indicates whether to search for several values in the ATTRIBUTIONS parameter (if specified), any of the specified or not the specified one.
CODE	Search filters on RIC, Attribution, Company name, NamedItem and Topics all in single CODE field. Note 1: If CODE is not specified a request is sent to the backend without applying any filters, so backend returns records instead of error. Note 2: Country codes, Regions, Industrial Sectors, Sports, General & Cross Market finance codes can be found in the TRKD Data Guide and are classed as Topics.
CODEOP	Values="or,and,andnot". User can enter several values in CODE parameter, f.e. CODE=IBM Microsoft. Parameter indicates whether to search for IBM and Microsoft or IBM or Microsoft.
COMPANIES	(Optional) Specifies to return news for specific company(s). Only RICs can be used as company identifiers.
COMPANIESOP	Values="or,and,andnot". The parameter indicates whether to search for several values in the COMPANIES parameter (if specified), any of the specified or not the specified one.
FREETEXT	Allows user to specify in a string key words to be searched for in the body of the story text.
FREETEXTOP	Values="or,and,andnot". The parameter indicates whether to search for several values in the FREETEXT parameter (if specified), any of the specified or not the specified one.
FROMDATE	(Optional) The Date of the first headline to be retrieved - in UTC (GMT+0) format.
HEADLINE	Allows user to enter in a string of key words to be searched for in the headline text.
HEADLINEOP	Values="or,and,andnot". The parameter indicates whether to search for several values in the HEADLINE parameter (if specified), any of the specified or not the specified one.
LANGUAGE	(Optional) Specified to return news in specific language. The list of LANGUAGE codes can be found in the 'Topic Codes' tab within the TRKD API for Wealth Management: News Guide.
LANGUAGEOP	Values="or,and,andnot". The parameter indicates whether to search for several values in the LANGUAGE parameter (if specified), any of the specified or not the specified one.
MAXHEADLINES	(Optional) The maximum number of headlines to be retrieved by the view (default is 25; max is 100).
OP	Values="or,and,andnot". Logical operation between different parameters (i.e. if user has specified CODE and FREETEXT). By default, user requests only one value, i.e. CODE=IBM. This parameter allows to use more complex logic like: CODE=IBM&FREETEXT=USA&OP=AND (search IBM news where news text contains USA). Topic codes can be found by calling the 'Get News Topics' TRKD API method in the Thomson Reuters News service.
PAGE	Sets the number of page to be loaded.
PAGESIZE	(Optional) The number of news headlines to display per page. Pagination will be applied to the view where the number of headlines exceeds the PAGESIZE value, up to a maximum of 100 headlines.
PRODUCT	This metadata constraint describes what internal Thomson Reuters News product the particular story has been assigned to. It is of limited use to TRKD users.
PRODUCTOP	Values="or,and,andnot". The parameter indicates whether to search for several values in the PRODUCT parameter (if specified), any of the specified or not the specified one.
PROVIDERS	(Optional) Specifies to return news for specified news provider.



PROVIDERSOP	Values="or,and,andnot". The parameter indicates whether to search for several values in the PROVIDERS parameter (if specified), any of the specified or not the specified one.
RICS	Reuters Instrument Code for the security to retrieve (including Chain RICs).
SID	(Optional) Cache key used for paging.
TODATE	(Optional) The Date of the last headline to be retrieved - in UTC (GMT+0) format.
TOPICS	(Optional) Specifies to return news for specific topics by code.
TOPICSOP	Values="or,and,andnot". The parameter indicates whether to search for several values in the TOPICS parameter (if specified), any of the specified or not the specified one.
WATCHLIST	Defines the name of the watchlist.

To display news headlines, the developer can construct the following URL by using the table above:

```
http:[views_server]/views/news/[appID]/headlines.aspx?companies=[RIC]
&pagesize=10&fromdate=02102010&todate=02122010&language=en-
US&freetext=USA&headline=some_headline&code=AND&codeop=value&languageop=value&headline=value&freetextop=valu
e&maxheadlines=40
```

The following URL requests news headlines for GOOG.O (Google) RIC with 10 headlines to be displayed per page and maximum 40 headlines:

HTTP Sample Request - News Headlines for Google
http://views.rkd.reuters.com/views/news/[appID]/headlines.aspx?code=GOOG.O&pagesize=10&maxheadlines=40

The developer gets the list of news headlines that meet the specified criteria:

- **UPDATE 2-Groupon, Pandora move on IPOs - sources**
14 January 2011 05:44 - Thomson Reuters
- **US RESEARCH SUMMARY-S&P 500 Jan 14 1030 GMT**
14 January 2011 05:30 - Thomson Reuters
- **(来週の焦点) 好調な米企業決算ならリスク選好継続、中国指標相次ぎ利上げを警戒**
14 January 2011 03:43 - Thomson Reuters
- **UPDATE 1-Compal sees higher 2011 shipments, but tablet threat**
14 January 2011 03:35 - Thomson Reuters
- **ANALYSE Google revient en Chine avec de nouveaux projets**
14 January 2011 02:38 - Thomson Reuters
- **BRIEF-RESEARCH ALERT-Evercore raises Google to equal-weight**
14 January 2011 02:26 - Thomson Reuters
- **Kreise - US-Schnäppchenportal Groupon bereitet Börsengang vor**
14 January 2011 02:13 - Thomson Reuters
- **ニューヨーク・タイムズ紙早版ヘッドライン（14日付）**
14 January 2011 00:44 - Thomson Reuters
- **PRESS DIGEST - New York Times business news - Jan 14**
14 January 2011 00:14 - Thomson Reuters
- **AGENDA ECONOMIQUE MONDE jusqu'au 31 janvier 2011**
14 January 2011 00:00 - Thomson Reuters

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To search for Reuters news, in English language with a headline containing Private Payrolls you need to submit the following request:

HTTP Sample Request - Headlines Containing Private Payrolls

[http://views.rkd.reuters.com/views/news/\[appID\]/headlines.aspx?code=FR|RTRS&codeop=Or&language=EN&headline=private payrolls](http://views.rkd.reuters.com/views/news/[appID]/headlines.aspx?code=FR|RTRS&codeop=Or&language=EN&headline=private%20payrolls)

To search for news headline for MKW, in English with corporation in the story, Gold in the headline and only headlines (maximum 50 displayed), you need to make the following request:

HTTP Sample Request - Headlines for MKW

[http://views.rkd.reuters.com/views/news/\[appID\]/headlines.aspx?code=MKW&pagesize=5&maxheadlines=50&language=EN&headline=gold&freetext=corporation](http://views.rkd.reuters.com/views/news/[appID]/headlines.aspx?code=MKW&pagesize=5&maxheadlines=50&language=EN&headline=gold&freetext=corporation)

To search for news headlines with Mergers and Acquisitions, you must submit the following request:

HTTP Sample Request - Mergers and Acquisitions Headlines

[http://views.rkd.reuters.com/views/news/\[appID\]/headlines.aspx?code=MRG](http://views.rkd.reuters.com/views/news/[appID]/headlines.aspx?code=MRG)

47.4.6.1 News Story Web View

The News Story Web View retrieves a single news item based on a unique story ID. The data is returned in the Thomson Reuters proprietary StoryML format (contains more detailed information).

The table provided below lists all available parameters which can be used for calling the News Story Web View:

Parameter	Description
STORYID	The StoryID is a NewsML URN, which is specified in the following format: urn:newsml:[provider id]:[date]:[doc id], e.g., "urn:newsml:reuters.com:20001106:nJIJ6SS016".
PRINT	(Optional) Defines whether to include the Print link on the displayed page.
SHARE_ICON	Defines whether to display share icons for social networks (facebook, twitter, digg.it, linkedin). Pr stands for print icon. Possible values are: fb, tw, di, ln, pr.
SHARE_NOTE	Adds text note to the link which will be displayed in social network.
SHARE_PORTAL_URL	Displays link to the portal, which uses Web Views.
SHARE_TITLE	Displays link title (if available).
SHARE_TOOL	Defines whether to display the share tools on a web view.
SHARE_TOOL_STYLE	Possible values: single, line, linemedium.

To display a news story, the user should can click a headline from the response or construct the following URL if they know the StoryID parameter:

```
/views/news/[appID]/story.aspx?storyid=[storyID]
```

HTTP Sample Request

```
http://views.rkd.reuters.com/views/news/[appID]/story.aspx?storyid=urn%3anewsml%3areuters.com%3a20110114%3anSGE70D03H%3a2
```

The user gets the following News Story Web View as a response:

PRESS DIGEST - New York Times business news - Jan 14



14 January 2011 00:14 - Thomson Reuters



REUTERS

Jan 14 (Reuters) - The following were the top stories in the New York Times business pages on Friday. Reuters has not verified these stories and does not vouch for their accuracy.

* The nation's largest banks are expected begin restoring their dividends in the first half of the year, a boon to pension funds and retirees.

* A newly released audit has found that the rural loan program, administered by the United States Department of Agriculture, was plagued by lax government oversight and many of the same sloppy banking practices that fed the broader mortgage debacle.

* Spain and Italy had strong results for their bond auctions on Thursday, easing immediate concerns about the ability of the euro zone's weakest members to raise money to meet debt obligations.

* In a meeting with publishers on Thursday, Borders Group Inc



THOMSON REUTERS

- To display a news story with social widget (defined set of social services and medium line style), the user must submit the following request:

HTTP Sample Request - News Story with Social Widget

```
http://views.rkd.reuters.com/views/news/[appID]/story.aspx?storyid=urn%3anewsml%3areuters.com%3a20110526%3anLDE74P1TJ%3a3&share_tool=true&share_icon=fb%7ctw%7cdi%7cln&share_tool_style=linemedium
```

The Social Widget (share tool) is a tool which allows the user to share public news stories via specific social networks – Facebook, Twitter, LinkedIn and Digg.

The user will get the following Web View as a response:

Arab Web clampdown hurts own economies-Google chief



26 May 2011 10:32 - Thomson Reuters



DEAUVILLE, France, May 26 (Reuters) - Arab leaders were wrong to block Internet access in an effort to quell popular revolts as such moves only hurt their own economies, Google



<GOOG.O> Chairman Eric Schmidt said on Thursday.

ID:nLDE74Q24P

The panel said there were few technical means to circumvent moves by governments to restrict internet access, as the infrastructure was frequently controlled by the government.

(Reporting by Nicholas Vinocur and Marie Maitre; Editing by Jon Boyle)

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Keywords: G8/GOOGLE ARAB

47.4.7 Charts Web View

The TRKD API Charts Web View is used to view a wide range of technical charts displays generated live by the Thomson Reuters Data Center analytics engine.

Charting is available on an Intraday and Interday basis:

- INTERDAY lets you retrieve historical time series prices on an instrument, summarized in daily, weekly or monthly periods.
- INTRADAY lets you retrieve a time series of Intraday market prices on an instrument, summarized in periods from 1 minute to 1 hour (configurable).

The supported time intervals (periods) for Intraday charts are: 1, 5, 15, 30, 60 minutes.

This Web View provides many customizable features giving you the control of how the data will be displayed within the view.

The user can customize the chart by selecting a specific pre-configured SKIN or changing skin parameters in the URL:

- A skin is a set of chart attributes stored together and associated with an index number. When requesting a chart, clients

- can simply choose a skin and the generated chart will have the width, height, colors, style, etc specified by the skin.
- Parameters are provided in the URL that requests the chart and can be used to override skin settings and also to customize chart contents.

The table provided below lists all the parameters available in the chart view:

Parameter	Description
ALLDAY	(Optional) Defines whether to show all values for the day (YES) or only those within the exchange hours (NO).
BGENDCOLOR	(Optional) Defines background end color for the gradient. Defaults to "230;230;230".
BGSTARTCOLOR	(Optional) Defines background start color for the gradient. Default is "255;255;255".
BGSTYLE	(Optional) Defines background style. Possible values="horizontal, vertical, forwarddiagonal, backwarddiagonal, largegrid, diagonalcross, percent05, percent10, percent20, percent25, percent30, percent40, percent50, percent60, percent70, percent75, percent80, percent90, lightdownwarddiagonal, lightupwarddiagonal, darkdownwarddiagonal, darkupwarddiagonal, widedownwarddiagonal, wideupwarddiagonal, lightvertical, lighthorizontal, narrowvertical, narrowhorizontal, darkvertical, darkhorizontal, dasheddownwarddiagonal, dashedupwarddiagonal, dashedhorizontal, dashedvertical, smallconfetti, largeconfetti, zigzag,wave, diagonalbrick, horizontalbrick, weave, plaid, divot, dottedgrid, dotteddiamond, shingle, trellis, sphere, smallgrid, smallcheckerboard, largecheckerboard, soliddiamond". Default is "largegrid".
BORDERCOLOR	(Optional) Defines color of outer frame, in red-green-blue 6-digit hexadecimal. Default is "100;100;100".
BORDERSTYLE	(Optional) Defines border style. Possible values="solid,dash,dashdot,dashdotdot,dot". Default is "dot".
BORDERWIDTH	(Optional) Defines width of border. Default is "1".
COMPANIES	(Optional) Parameter used for symbol resolution. It means you can specify 3rd-Party symbols and the application will resolve them to RICs.
DISPLAYLINKS	Defines whether to display links to charts with other periodicity (1 day, 1 week, 1 month, 6 months, 1 year, 5 years) for the same instrument.
ENDDATE	End date for timeseries to be retrieved. Defaults to current date.
ERROR	(Optional) TRUE / FALSE. If set to FALSE - the application will display only available/identifiable RICs in the rendered view. If set to TRUE - the application will display available/identifiable RICs and notify the user about invalid RICs at the bottom of the rendered view.
FONT	(Optional) Specifies a font to use. Zero is built-in raster, others are TrueType.
FONT_SIZE	(Optional) Defines font size for the font used in the chart. Default is "8".
FONT_SIZE_LEGEND	(Optional) Defines font size for the font used in the chart legend.
FONT_SIZE_TITLE	(Optional) Defines font size for the font in the chart title.
FONT_SIZE_X_MAJOR	(Optional) Defines font size for the major X-Axis font.
FONT_SIZE_X_MINOR	(Optional) Defines font size for the minor X-Axis font.
FONT_SIZE_Y_MAJOR	(Optional) Defines font size for the major Y-Axis font.
FONT_SIZE_Y_MINOR	(Optional) Defines font size for the minor Y-Axis font.
FONT_SIZE_Y_TITLE	(Optional) Defines font size for the font in Y-Axis title.
FRAME	(Optional) Defines whether to display the values and volumes frames (and borders).
FRAMECOLOR	(Optional) Defines color of value and volume borders, in red-green-blue 6-digit hexadecimal.
FRAMESTYLE	(Optional) Defines frame style. Possible values="solid, dashed, dotted, ridge, double, inset, outset, groove".
FRAMEWIDTH	(Optional) Defines width of frame.
GRADIENT	(Optional) Defines gradient for background image.
GRADIENTSTYLE	(Optional) Defines gradient style. Possible values ="horizontal, vertical, forwarddiagonal, backwarddiagonal, horizontalcycle, verticalcycle, forwarddiagonalcycle, backwarddiagonalcycle".
GRID	(Optional) Defines whether or not to overlay chart with a grid.



GRIDCOLOR	(Optional) The color of the grid lines, in red-green-blue 6-digit hexadecimal.
GRIDSTYLE	(Optional) Defines grid style. Possible values="solid,dash,dashdot,dashdotdot,dot".
GRIDWIDTH	(Optional) Defines the width of grid.
HEIGHT	(Optional) The height of the image in pixels. Defaults to 100px.
IMGTYPE	(Optional) Defines image type. Possible values="png, bmp, jpeg, gif, emf".
LABELFORMAT	(Optional) Defines how much data the label contains, full data, (e.g. Daily Microsoft Bid (23.43)) or short form (MSFT.O Bid (24.32)).
LEGEND	(Optional) Display chart legend.
LEGENDPOS	(Optional) Defines legend position.
LEGENDSTYLE	(Optional) Possible values="long, minimum, short".
LINECOLOR	(Optional) Defines color chart line for styles LINE and OHLC.
LINESIZE	(Optional) Integer [1-5]. Defines width in pixels of chart line.
PERIOD	(Optional) Granularity of data to display (minute, 30 mins, hourly, daily, weekly, monthly). Defaults to daily.
PRECISION	(Optional) Defines number of decimal characters that must be displayed after the delimiter (".").
RICS	The Reuters Instrument Code(s) for the securities which should be charted.
SHOWRANGE	(Optional) Defines whether to show the time period range.
SHOWTITLE	(Optional) Shows the title of the chart.
SHOWXAXIS	(Optional) Displays x axis on the chart.
SHOWYAXIS	(Optional) Displays y axis on the chart.
SKIN	(Optional) SKIN index. Chooses one of the pre-configured skins. Default is SKIN=0.
STARTDATE	Start date for timeseries to be retrieved. Defaults to 1 year ago.
STYLE	(Optional) Defines the style of the chart, either (line), (candles) or (Open/high/low/close). Possible values are: "abscng, bband, cci, candle, chkmf, ema, envlp, hl, hlc, ipp, invrs, line, macd, macdf, mdnp, mom, obv, obvw, ohlc, osc, pctcng, pctr, roc, rsi, sma, stochf, stochs, vltc, vol, wclose, wma". Default value is "line".
TEXTCOLOR	(Optional) Defines color of labels and axis values, in red-green-blue 6-digit hexadecimal.
TITLE	(Optional) Displays the custom title of a chart.
TITLES	(Optional) Specifies title(s) for Y axis. Possible values="none, type, currency, unit, displayunit, all".
VALUECOLOR	(Optional) Defines color of axis values, in red-green-blue 6-digit hexadecimal.
VOL	(Optional) Defines whether or not to show a volume chart at the bottom.
VOLCOLOR	(Optional) Defines the color of volume chart.
VOLLINESIZE	(Optional) Defines line size of volume subchart.
VOLSIZE	(Optional) Defines size of volume subchart.
WATCHLIST	(Optional) Defines the name of the watchlist.
WIDTH	(Optional) The width of the image in pixels. Defaults to 500px.

Note: When user loads Chart Web View with parameters 'period' or 'startdate' the chart is displayed using the specified parameter. If after this user clicks a link of the pre-canned time-series, the values of 'period' or 'startdate' parameters will be overwritten and user will not be informed about.

To make request for the quote data, the developer should specify the following at the end of URL:

```
/views/charts/[appID]/default.aspx?rics=[RIC]
```

HTTP Sample Request - Chart for IBM and Google (Default Skin)

```
http://views.rkd.reuters.com/views/charts/[appID]/default.aspx?rics=IBM.N|GOOG.O
```

By default, SKIN=0 is set, so the developer will get the following chart image as a result:





The user can customize the chart in two ways:

1. By providing the SKIN parameter in the string - this displays a 'pre-canned' chart provided by Thomson Reuters. To use the default skin, you might omit SKIN=0 parameter in the string. There are different skins with the pre-set values (from [0] to [21]).
2. By providing the parameters listed in the above table in the string - this allows the user to tailor the chart to their needs.

HTTP Sample Requests

```
http://views.rkd.reuters.com/views/charts/[appID]/default.aspx?rics=GOOG.O&skin=6
OR
http://views.rkd.reuters.com/views/charts/[appID]/default.aspx?rics=GOOG.O|VOD.L|MSFT.O|IBM.N&skin=8&linecolor=0;0;200|50;50;50|
200;100;0|0;200;0
```

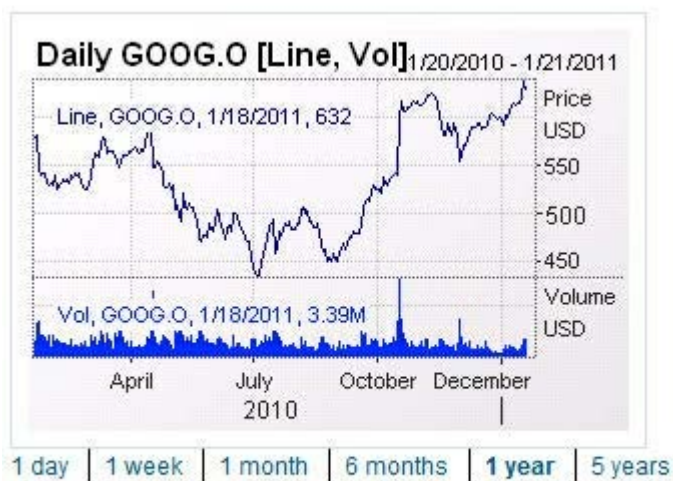
Note: The Chart View which appears from the Chart Link in the Snap Quote view has SKIN=0.

Users can customize the chart to look as needed. The SKIN=19 is designed to provide the same chart in a smaller form (width=300 and height=200).

HTTP Sample Requests - Small Chart for Google

```
http://views.rkd.reuters.com/views/charts/[appID]/default.aspx?rics=GOOG.O&skin=19
```

The screen below shows chart for Google in small form:



Please find the XML versions of the pre-canned skins in the Charts Skins section.

To request a line chart for IBM with custom colors, you would submit the following request:

HTTP Sample Requests - Chart with Multiple RICs and Currencies on Separate Axis

[https://views.rkd.reuters.com/views/charts/\[appID\]/default.aspx?rics=IBM.N&linecolor=255;128;0&volcolor=0;90;132](https://views.rkd.reuters.com/views/charts/[appID]/default.aspx?rics=IBM.N&linecolor=255;128;0&volcolor=0;90;132)

You will get the following result:



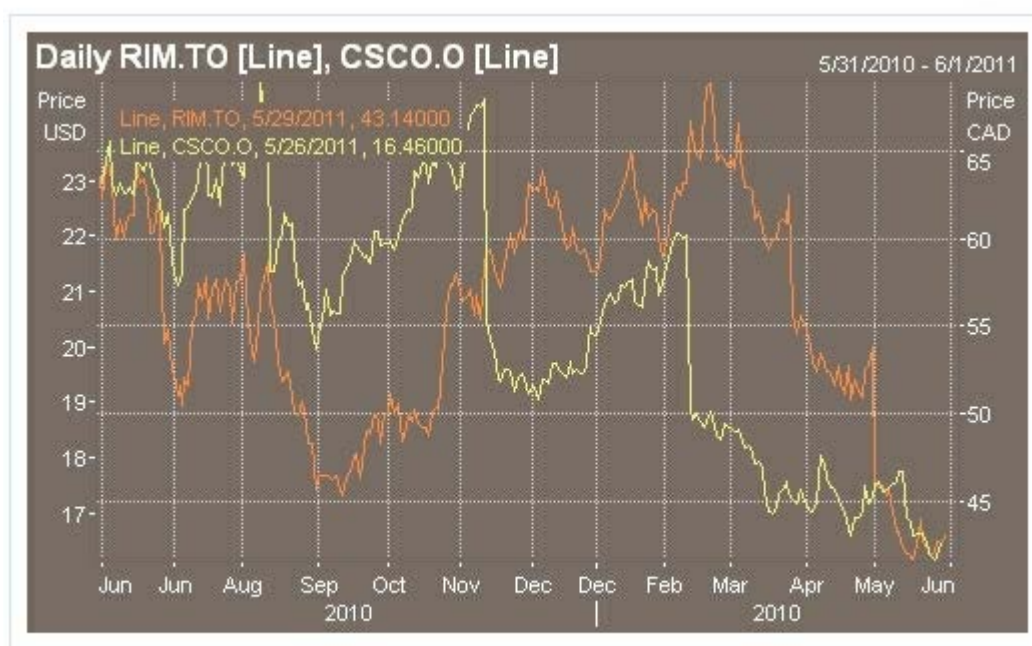
If a user requests a chart with multiple RICs from different exchanges, then by default the first RIC will display on the right y-axis, the second will display on the left y-axis and any subsequent RICs in alternative currencies will be plotted on the left y-axis.

To request a line chart for Research In Motion and Cisco with custom colors displaying two separate currencies/axis you would submit a request similar to the following:

HTTP Sample Requests - Chart for Research in Motion with Two Separate Currencies/Axis

```
https://views.rkd.reuters.com/views/charts/[appID]/default.aspx?rics=RIM.TO|CSCO.
O&bgstartcolor=118;108;98&bgendcolor=118;108;98&linecolor=255;136;64|
228;242;121&textcolor=255;255;255&vol=false&valuecolor=255;255;255&displaylinks=false
```

You will get the following result:



To request a weekly period chart for Research In Motion displaying analyses - line, simple moving average (SMA) and bar (OHLC) - custom colors for analysis and volume, the request would be created as follows:

HTTP Sample Requests - Customized Chart for Research In Motion

```
http://views.rkd.reuters.com/views/charts/[appID]/default.aspx?rics=RIM.TO|RIM.TO|RIM.TO&period=weekly&style=sma|ohlc|line&linecolor=255;128;0|0;0;0|156;38;115&volcolor=156;38;115&allday=false
```

The following result will be displayed:



To request a chart for Google in small skin without displaying X and Y axes, title and links, submit the following request:

HTTP Sample Requests - Customized Chart for Google

[http://views.rkd.reuters.com/views/charts/\[appID\]/default.aspx?rics=GOOG.O&skin=19&vol=false&showxaxis=false&showyaxis=false&showtitle=false&displaylinks=false](http://views.rkd.reuters.com/views/charts/[appID]/default.aspx?rics=GOOG.O&skin=19&vol=false&showxaxis=false&showyaxis=false&showtitle=false&displaylinks=false)

The following result will be displayed:



47.4.8 Search Web View

This view can be used to search for organizations, instruments, quotes and indices.

Users can perform searches on the following data:

- Search All - Searches any item in the index.
- Organization - Searches Organizations involved in the financial markets.
- Commodity Quote - Searches Commodity Quotes.
- Derivative Instruments - Searches on any derivative instrument.
- Derivative Quote - Searches on any derivative quote, additional filter or query term required to limit to Option, Future, Warrant etc.
- Equity Quote - Searches Fund Quotes.
- Fund Quote - Searches Government and Corporate Bond instruments.
- Government and Corporate Bond Instruments - Searches Government and Corporate Bond instruments.
- Index Instruments - Searches Indices at Instrument level.
- Index Quote - Searches Quotes on indices.

Note: You can use Chinese or Japanese characters when searching for data.

The table provided below lists the parameters which can be used for the Search Web View:

Parameter	Description
ASSETCATEGORY	(Optional) Allows user to show only specific asset classes in results - e.g., Options, Warrants, etc.
BLOCKSIZE	(Optional) This is the maximum number of rows returned in one request. Null = 50 records, 0 = 0 records, >0 and <=50 - the number of records to be returned.
CODESCHEME	(Optional) Specifies the code schemes included in the query. Default is "all" codes. Each scheme is identified by a 3-letter code (e.g. WPK, ISN, etc).
COUNTRY	(Optional) Name of country. For equity organizations, this is the Country of HQ. For bond organizations, this is the Country of Domicile. ISO 3-letter code (e.g. "GBR"). Dynamic list - will be stored for a week. Country codes can be found in Country Codes section in Company Administration chapter.
DATE	(Optional) Used to filter out OptionStikes by expiration date, applied in combination with "exch" parameter. (Example: date=07/16/2010)
ENCISIN	(Optional) Encrypted ISIN, is used when the user is not authorized to view ISINs.
EXCH	(Optional) Used to filter out OptionStikes by exchange code. Applied in combination with "date" parameter. (Example: exch=LIF).
ISIN	(Optional) Used to filter out warrant quotes, which contains Issue ISIN equal to the value passed in the "isin" parameter (Example: isin=DE000UB9DJT8).
ITM	(Optional) Used to filter out OptionStikes by "in the money" flag. If 'itm' is true we leave only records with "in the money" flag. (Example: itm=true)
MAXREC	(Optional) The maximum number of records that will be returned for a requested record set. Null = 50 records, 0 = 0 records, >0 and <=1000 - the number of records to be returned.
PAGE	(Optional) This parameter is used to navigate between pages. (Example: page=2)
PI	(Optional) Used to filter out the required class of securities issued by the company, having PI equal to the value passed in the "pi" parameter. (Example: pi=19676)
PRECISION	(Optional) Defines whether to search for anything which starts from (Starts with [1]) or includes (Includes [2]) the characters specified in the search string.
QUERY	(Optional) Specifies a code or name (or part of name) of organization to search. (Example: query=ibm)
REFINE	(Optional) Used to filter out the required class of securities (by SearchAllCategory value).(Example: refine=Options)
SECTOR	(Optional) Industry code based on Thomson Reuters strategic classification - TRBC. It should be specified as a hierarchical chain of sectors, like Basic Materials/Chemicals/Chemicals/Agricultural Chemicals. (For example: sector=basic+materials%2Fchemicals%2Fchemicals%2Fagricultural+chemicals) To retrieve full hierarchical chain of sectors you can use the Get Industry Classification Schema Full Hierarchy (GetIndustryClassificationSchemaFullHierarchy_1) request and specify TRBC2009 as taxonomy code.
SHOWFORM	(Optional) Defines whether to show results screen in the frame or not: • If set to TRUE then the user will see the results in the frame once submit is clicked.



	If set to FALSE the user will need to use their own search capability and pass all parameters into the URL for the results to show in designated frame.
SHOWREFINERESULTS	(Optional) Parameter to show the refine results action.
SID	(Optional) Cache key used for paging.
SORTING	(Optional) Used to sort the wanted column in the displayed table. It is applied in the following pattern: [ad]\d+. (Example: sorting=a3 - sorting the 3rd column in ascending order).

Note: If the user sets MAXREC=0 and/or BLOCKSIZE=0, then the View will return no results in the response. Thomson Reuters recommends that users specify the "MAXREC" and "BLOCKSIZE" parameters in their calls.

Note: The reason for not applying base currency conversion to Warrants is that a warrant has multiple quote RICs and they may have multiple currencies. So, there isn't a single currency to convert the value from.

To open the Search input form, you should specify the following at the end of URL:

/views/[appID]/search/default.aspx

HTTP Sample Request

http://views.rkd.reuters.com/views/search/[appID]/default.aspx

The following Search form will be returned defaulting to Basic Search on Name:

Name

Country/Sector

Search

Advanced Search



The Advanced Search option provides the following options:

Name

Country/Sector

Search

Basic Search

Search Type:

Search Tips

Code Scheme:



Users will have the option of searching for organizations from the 'Name' search or the 'Country/Sector' search.

Examples:

1. This example searches for Microsoft items in the database and is configured to retrieve 1000 results max:

HTTP Sample Request - Search for Microsoft

http://views.rkd.reuters.com/views/search/[appID]/default.aspx?query=microsoft&maxrec=1000

The user gets the following Web View as a result:



Name [Advanced Search](#)

Search Results 1-50 of 4785 [New search](#)

Microsoft Corporation MSFT.O

United States - MICROSOFT CORP - Ticker:MSFT

Options Futures
Warrants

Microsoft Corporation (Ordinary) - Consolidated Issue Listed on NASDAQ Global Select Market MSFT.O

MICROSOFT - Issue ISIN:US5949181045 - Wert:870747 - Valoren:951692 - CUSIP:594918104

Microsoft Corporation (Ordinary) - Xetra MSFTEUR.DEp

MICROSOFT CP - Issue ISIN:US5949181045 - Wert:870747 - Valoren:951692 - CUSIP:594918104

Refine results

Other Quote 3058

Warrants 1134

Options 230

Bonds 144

Credit Default Swaps 107

Futures 55

Equities 52

Other Instrument 4

Companies/Issuers 1

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Note: To switch off the input form so that it is not displayed for the user the developer should include '&SHOWFORM=FALSE' parameter.

2. This example searches for IBM bonds in the database and is configured to retrieve results in blocks each containing 5 records:

HTTP Sample Request - Search for IBM Bonds

```
http://views.rkd.reuters.com/views/search/[appID]/default.aspx?query=ibm&assetcategory=bond&blocksize=5
```

The user gets the following Web View as a result:

Name [Advanced Search](#)

Bonds
Search Results 1-5 of 1837 [New search](#)

Organization Name	Coupon	Maturity	Currency	Quote Type	ISIN	RIC
International Business Machines Corp	0	06 August 2010	USD	Fixed Income/Discount Note	US45920GH669	
International Business Machines Corp	0	23 September 2008	USD	Fixed Income/Discount Note	US45920FJP45	
International Business Machines Corp	0	17 June 2011	USD	Fixed Income/Discount Note	US45920GTH91	45920GTH9=
International Business Machines Corp	0	02 May 2011	USD	Fixed Income/Discount Note	US45920GS237	
International Business Machines Corp	0	02 June 2011	USD	Fixed Income/Discount Note	US45920GT227	

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3. This example searches for Cisco records under Equity asset category in the database and retrieves max 15 records:

HTTP Sample Request - Search for Cisco

```
http://views.rkd.reuters.com/views/search/[appID]/default.aspx?query=CSCO&assetcategory=equity&maxrec=15
```

The user gets the following Web View as a result:

Name [Advanced Search](#)

Equities
Search Results 1-15 of 61 [New search](#)

Organization Name	Exchange	Issue ISIN	RIC
Cisco Systems Inc	Consolidated Issue Listed on NASDAQ Global Select Market	US17275R1023	CSCO.O
Cisco Systems Inc	NASDAQ Stock Exchange Global Select Market	US17275R1023	CSCO.OQ
Cisco Systems Inc	NASD ADF when trading NASDAQ Global Select Market	US17275R1023	CSCO.DF
Cisco Systems Inc	Boston SE when trading NASDAQ Global Select Market	US17275R1023	CSCO.B
Cisco Systems Inc	Stuttgart Stock Exchange	US17275R1023	CSCO.SG
Cisco Systems Inc	Cross-market Data Service	US17275R1023	CSCOEUR.xt
Cisco Systems Inc	Xetra	US17275R1023	CSCO.DE
Cisco Systems Inc	MiFID Cross Market Best Bid/Offer Service	US17275R1023	CSCOEUR.xbo
Cisco Systems Inc	Munich Stock Exchange	US17275R1023	CSCO.MU
Cisco Systems Inc	Cross-market Data Service	US17275R1023	CSCOUSD.xt
Cisco Systems Inc	Berlin Stock Exchange	US17275R1023	CSCO.BE
Cisco Systems Inc	Hamburg Stock Exchange	US17275R1023	CSCO.H
Cisco Systems Inc	Bolsa Mexicana de Valores S.A. de C.V.	US17275R1023	CSCO.MX
Cisco Systems Inc	Dusseldorf Stock Exchange	US17275R1023	CSCO.D
Cisco Systems Inc	Hanover Stock Exchange	US17275R1023	CSCO.HA



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4. This example searches for HSBC futures:

HTTP Sample Request - Search for HSBC Futures

[http://views.rkd.reuters.com/views/search/\[appID\]/default.aspx?query=HSBC&assetcategory=future](http://views.rkd.reuters.com/views/search/[appID]/default.aspx?query=HSBC&assetcategory=future)

The user gets the following Web View as a result:

Name [Advanced Search](#)

Futures
Search Results 1-15 of 94 [New search](#)

Instrument Name	Exchange	Issue ISIN	RIC
HSBC Holdings PLC Equity Future Chain	The London International Financial Futures and Options Exchange		0#HSBAIf:
HSBC	Eurex		0#HSBF2:
HSBC div	Eurex		0#H2SB:
HSBC Holdings PLC Equity Future Chain	Hong Kong Futures Exchange Ltd		0#HKB:
HSBC HLDGS FUT	Hong Kong Futures Exchange Ltd		0#HHKC:
HSBC Holdings plc c1	One Chicago LLC		HBCD1c1:OX
HSBC HOLDINGS PLC c1	One Chicago LLC		HBC1c1:OX
HSBC Fut c1	Eurex		HSBF2c1
HSBC Holdings Front Mon Continuation; LIFFE	The London International Financial Futures and Options Exchange		HSBAIfc1
HSBC Holdings plc c2	One Chicago LLC		HBCD1c2:OX
HSBC HOLDINGS PLC c2	One Chicago LLC		HBC1c2:OX
HSBC Fut c2	Eurex		HSBF2c2
HSBC Holdings 2nd Mon Continuation; LIFFE	The London International Financial Futures and Options Exchange		HSBAIfc2
HSBC Holdings plc c3	One Chicago LLC		HBCD1c3:OX
HSBC HOLDINGS PLC c3	One Chicago LLC		HBC1c3:OX



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5. This example shows the search on FORD warrants:

HTTP Sample Request - Search for Ford Warrants

```
http://views.rkd.reuters.com/views/search/[appID]/default.aspx?query=FORD&assetcategory=warrant
```

The user gets the following Web View as a result:

Name	Country/Sector					
Ford		Search Advanced Search				

Warrants
Search Results 1-15 of 258

New search

Underlying Name	Issuer Name	Put/Call	Strike Price	Expiration	ISIN	Underlying RIC
Ford Motor Ord Shs		Call	28	14 September 2011	DE000CM4GC69	F.N
Ford Motor Ord Shs		Call	32	14 September 2011	DE000CM6BP75	F.N
Ford Motor Ord Shs		Put	15	09 September 2011	DE000DE38NH9	F.N
Ford Motor Ord Shs		Put	18	09 September 2011	DE000DE38NJ5	F.N
Ford Motor Ord Shs		Call	10	14 September 2011	DE000CM1QQ07	F.N
Ford Motor Ord Shs		Call	12	14 September 2011	DE000CM1QQ15	F.N
Ford Motor Ord Shs		Call	15	14 September 2011	DE000CM1QQ23	F.N
Ford Motor Ord Shs		Call	18	14 September 2011	DE000CM1QQ31	F.N
Ford Motor Ord Shs		Call	20	14 September 2011	DE000CM1QQ49	F.N
Ford Motor Ord Shs		Call	22	14 September 2011	DE000CM1QQ56	F.N
Ford Motor Ord Shs		Call	25	14 September 2011	DE000CM1QQ64	F.N
Ford Motor Ord Shs		Put	18	13 December 2011	DE000LS0RZF4	F.N
Ford Motor Ord Shs		Call	32	14 December 2011	DE000CM6BP83	F.N
Ford Motor Ord Shs		Put	15	09 December 2011	DE000DE38NK3	F.N
Ford Motor Ord Shs		Put	18	09 December 2011	DE000DE38NL1	F.N



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6. This example searches for IBM Options in the database:

HTTP Sample Request - Search for IBM Options

```
http://views.rkd.reuters.com/views/search/[appID]/default.aspx?query=IBM&assetcategory=option
```

The user gets the following Web View as a result:



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[Advanced Search](#)

Options
Search Results 1-9 of 9 [New search](#)

Options	Expiration	Exchange	Quotes
IBM chains			Chains
ALPHA IBM VS SPY chains			Chains
ALPHA IBM VS SPY chains			Chains
IBM options		Eurex	All, in the money
IBM options	13 June 2011	South African Futures Exchange	All, in the money
IBM options	19 September 2011	South African Futures Exchange	All, in the money
IBM options	19 December 2011	South African Futures Exchange	All, in the money
IBM options	21 January 2012	Options Price Reporting Authority BBO	All, in the money
IBM options	19 January 2013	Options Price Reporting Authority BBO	All, in the money



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7. This example searches for all GE items:

HTTP Sample Request - Search for GE

```
http://views.rkd.reuters.com/views/search/[appID]/default.aspx?query=ge&assetcategory=all&blocksize=10
```

The user gets the following Web View as a result:



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Name
Country/Sector

GE
Search Advanced Search

Search Results 1-15 of 42413
New search

General Electric Company United States - General Electric - Ticker:GE Options Futures Bonds Warrants	GE	Refine results Bonds 21232 Other Quote 14075 FX & Money 4435 Credit Default Swaps 987 Warrants 589 Funds 354 Options 314 Equities 247 Companies/Issuers 87 Futures 52 Other Instrument 35 Indices 3 Other 2 Commodities & Energy 1
Assicurazioni Generali SpA Italy - Generali - Ticker:GASI Options Futures Bonds Warrants	GASI.MI	
GE Sanyo Credit Co Ltd Japan - GE Sanyo Credit - Ticker:GESCR		
China Gezhouba Group Co Ltd China - Gezhouba - Ticker:CNGZB Bonds	600068.SS	



8. This example searches for all option chains under GE:

HTTP Sample Request - Search for Option Chains under GE

[http://views.rkd.reuters.com/views/search/\[appID\]/default.aspx?query=ge&assetcategory=optionchains&blocksize=10](http://views.rkd.reuters.com/views/search/[appID]/default.aspx?query=ge&assetcategory=optionchains&blocksize=10)

The user gets the following Web View as a result:

Name
Country/Sector

GE
Search Advanced Search

Option Chains
Search Results 1-5 of 5
New search

Organization Name	Exchange	RIC
GENERAL ELECTRIC	Bolsa de Comercio de Buenos Aires	0#GE*.BA
GENERAL ELECTRIC STK OPTIONS CHAIN	Options Price Reporting Authority BBO	0#GE*.U
ALPHA GE VS SPY	Options Price Reporting Authority BBO	0#GESPY*.U
ALPHA GE VS SPY	Options Price Reporting Authority BBO	0#LVSPY*.U
GENERAL ELEC CO OPTIONS CHAIN OF CHAIN OPRA	Options Price Reporting Authority BBO	Z#GE*.U



9. This example searches for all organizations in Norway:

HTTP Sample Request - Search for All Organizations in Norway (with Input Form Removed)

```
http://views.rkd.reuters.com/views/search/[appID]/default.aspx?country=NOR&SHOWFORM=FALSE&BLOCKSIZE=10
```

The user gets the following Web View as a result:

Industry

Search Results 1-10 of 578

Organization Name	Other Instruments
NORWAY, KINGDOM OF (GOVERNMENT)	Bonds
Statoil ASA	Options, Warrants, Futures, Bonds
Telenor ASA	Options, Warrants, Futures, Bonds
Dnb Nor ASA	Options, Warrants, Futures
Yara International ASA	Options, Warrants, Futures
Norsk Hydro ASA	Options, Warrants, Futures, Bonds
Orkla ASA	Options, Warrants, Futures
GJENSIDIGE FORSIKRING ASA	Options, Equities, Futures
Aker Solutions ASA	Options, Futures
Storebrand ASA	Options, Futures

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10. Search for all organizations in Norway in the Applied Resources Sector:

HTTP Sample Request - Search for All Organizations in Norway in the Applied Resources Sector

```
http://views.rkd.reuters.com/views/search/[appID]/default.aspx?country=NOR&sector=basic+materials%2Fapplied+resources
```

The user gets the following Web View as a result:

Name	Country/Sector
Country:	Norway Add Search
Sector:	Applied Resources Add

Industry

Search Results 1-1 of 1

[New search](#)

Organization Name	Other Instruments
Norske Skogindustrier ASA	Options, Warrants, Futures, Bonds



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11. Search for all organizations in the Chemicals Sector:

HTTP Sample Request - Search for All Organizations in the Chemicals Sector

```
http://views.rkd.reuters.com/views/search/[appID]/default.aspx?sector=basic+materials%2Fchemicals
```



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The user gets the following Web View as a result:

Name

Country/Sector

Country:

Add

Sector:

Add

Search

Industry

Search Results 1-50 of 584

New search

Organization Name	Other Instruments
SPDR S&P 500 ETF	Options, Futures, Funds
Basf Se	Options, Warrants, Futures, Bonds
Potash Corp Of Saskatchewan Inc	Options, Warrants, Futures, Bonds
E I Du Pont De Nemours And Co	Options, Warrants, Futures, Bonds
Dow Chemical Co	Options, Warrants, Futures, Bonds
Monsanto Co	Options, Warrants, Futures
L Air Liquide Societe Anonyme Pour L Etude Et L Exploitation Des Procedes George	Options, Warrants, Futures, Bonds
Praxair Inc	Options, Futures, Bonds
Mitsubishi Gas Chemical Co Inc	Bonds


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47.4.9 Significant Developments Web View

Significant Developments is a news analysis and filtering service that identifies crucial, market-moving company news on a near real-time basis for a large universe of public companies. You can use Significant Developments Web Views to screen through company press releases and briefly summarize major company specific developments. The targeted coverage is 30,000+ publicly traded companies in 80 countries.

The table provided below lists the parameters which can be used by the Significant Developments Web View:

Parameter	Description
COMPANIES	(Optional) Parameter used for symbol resolution. The user can specify 3rd-Party symbols and the application will resolve them to RICs.
ERROR	(Optional) TRUE / FALSE. If set to FALSE - the application will display only available/identifiable RICs in the rendered view. If set to TRUE - the application will display available/identifiable RICs and notify the user about invalid RICs at the bottom of the rendered view.
MAXHEADLINES	(Optional) The maximum number of headlines to be retrieved by the view (default is 100).
ORDERBY	Defines how response items must be ordered. Available options are: Release Date, Company name, Headline or Topic.
OUTPUT	Defines the format of the output file - either HTML or XLS.
PAGE	Defines what page number to display.
PAGESIZE	Specifies the max number of significant development headlines to be displayed in the view at a given time.
PERIODFROM	The starting date where Significant Developments should begin searching for news stories.
PERIODRANGE	The period where Significant Developments should search for news stories. Available options are: Today, this week, 1 week, 2 weeks, 1 month, 2 months, 3 months, 6 months, 1 year, Custom.
PERIODTO	The end date where Significant Developments should end searching for news stories.
RICS	The Reuters Instrument Code(s) for the company for which Significant Developments should be searched.
SHOWFORM	Defines whether to show results screen in the frame or not: - If set to TRUE then the user will see the results in the frame once submit is clicked. - If set to FALSE the user will need to use their own search capability and pass all parameters into the URL for the results to show in designated frame.



Symbol: Top Stories: ☐ Yes ☒ No
 Topic: Significance:
 Period:
 From: To:

Export

Release Date	Company	Headline	Topic
05 October 2010 12:00	IBM.N	IBM Corporation And Petrom Teams Up For Ten Year Data Center And Services Agreement	Business Deals
05 October 2010 10:03	TRI.N	Thomson Reuters Corporation Acquires Serengeti Law	Mergers / Acquisitions
05 October 2010 09:56	IBM.N	IBM Corporation Launches New Cloud Collaboration Services	General Products
15 September 2010 11:06	IBM.N	NEON Files Motion For Partial Summary Judgment In Against IBM Corporation	Corporate Litigation
14 September 2010 08:00	TRI.N	Thomson Reuters Corporation Announces Launch Of Eikon	General Products
14 September 2010 07:11	GOOG.OQ	NIIT Limited Launches Advanced Online Advertising Program	

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Note: Users can use the '&SHOWFORM=FALSE' parameter to remove the input form and display ONLY the results table.

3. Displaying a single development:

HTTP Sample Request - Single Significant Development Story Web View

[http://views.rkd.reuters.com/views/sigdev/\[appID\]/development.aspx?sigdev_id=2349375](http://views.rkd.reuters.com/views/sigdev/[appID]/development.aspx?sigdev_id=2349375)

The table provided below lists the parameters which can be used by a single Significant Developments Web View:

Parameter	Description
PRINT	(Optional) Defines whether to display the Print link.
SIGDEV_ID	Sets the ID of the specific significant development.

The user gets the following Web View as a result:

Sterling Chemicals, Inc. To Be Acquired By Eastman Chemical Company



22 June 2011 09:00 - Mergers / Acquisitions - High

Sterling Chemicals, Inc. announced that it has entered into a definitive merger agreement pursuant to which Eastman Chemical Company will acquire all of the outstanding equity of Sterling Chemicals for \$100 million in cash, subject to certain adjustments as provided in the merger agreement. Under the terms of the transaction, the holders of Sterling Chemicals' common stock, par value \$0.01 per share, will receive \$2.50 per share in cash. Although, as of April 1, 2011, the aggregate Liquidation Value of Sterling Chemicals' outstanding shares of Series A Convertible Preferred Stock was \$110,070,204, which aggregate Liquidation Value will increase to \$114,473,006 on July 1, 2011, the holders of Sterling Chemicals' outstanding shares of Series A Convertible Preferred Stock have agreed to support the transaction and will only receive \$92,928,850 in the aggregate in respect of their Series A Convertible Preferred Stock, subject to adjustment as provided in the merger agreement. The merger is expected to close in the third quarter of 2011 after receipt of required regulatory approvals and the satisfaction of other customary closing conditions. In connection with the transaction, Moelis & Company LLC acted as exclusive financial advisor and Alston & Bird LLP acted as legal counsel to the special committee of the board of directors of Sterling Chemicals and Akin Gump Strauss Hauer & Feld LLP acted as legal counsel to Sterling Chemicals.



4. Search for mergers and acquisitions events for IBM, Rolls-Royce & Google using symbol resolution:

HTTP Sample Request - Mergers and Acquisitions for IBM, Rolls-Royce & Google Using Symbol Resolution

```
http://views.rkd.reuters.com/views/sigdev/[appID]/default.aspx?companies=IBM.N|RR|
Goog&topstories=false&topic=207&significance=all&periodrange=month1
```

The user gets the following Web View as a result:

Symbol:	IBM.N RR.L GOOG.O	Top Stories:	☐ Yes ☒ No
Topic:	Mergers / Acquisitions	Significance:	All
Period:	1 month		
Search		Click here to verify the company selection... [-]	
RR:	RR.L	v	
Goog:	GOOG.O	v	
Refine			

 Export

	Release Date	Company	Headline	Topic
	21 June 2011 18:32	RR.L	Daimler AG, Rolls-Royce Group plc Own 85% Of Tognum AG -DJ	Strategic Combinations, Mergers / Acquisitions
	18 June 2011 17:42	GOOG.OQ	Apple Inc., Intel Corporation And Telefonaktiebolaget LM Ericsson Vie For Nortel Networks's Patents With Google Inc.-Reuters	Mergers / Acquisitions
	10 June 2011 03:29	RR.L	Rolls-Royce Group plc Refrains From Tognum AG Fuel Cell Business Purchase-DJ	Mergers / Acquisitions
	09 June 2011 19:34	GOOG.OQ	Google Inc. Buys AdMeld In Latest Web Acquisition-Reuters	Mergers / Acquisitions
	05 June 2011 16:43	RR.L	Daimler AG Expects It Got Majority Of Tognum AG In A Bid With Rolls-Royce Group plc-Reuters	Strategic Combinations, Mergers / Acquisitions
	03 June 2011 20:15	GOOG.OQ	US Probes Apple Inc, Google, Inc.'s Bid For Nortel Networks's Patents-Reuters	Mergers / Acquisitions



47.4.10 Fundamentals Web View

Fundamentals Web Views allow users to access timely, accurate, and comprehensive financial summary information.

Fundamentals data includes:

- Financial Statements Reports
 - o Income Statement
 - o Balance Sheet
 - o Cash Flow
- Ratios Report

The table provided below lists the parameters which can be used by the Fundamentals Web View (where appropriate):

Parameter	Description
RIC	The Reuters Instrument Code(s) for the company for which data should be searched.
RepoNo	Thomson Reuters internal company identifier for fundamentals.
PERIODBASIS	Defines the reporting basis. Either Annual or Interim.
TAB	Defines what financial data should be displayed: Income Statement, Balance Sheet, Cash Flow or Ratios.
COMPONENT	(Available only for Ratios data) Defines the component of Ratios data - available items are: PVOL - Price and Volume INCST - Income Statement VALR - Valuation PSHR - Per Share Data FSTR - Financial Strength DIV - Dividend GREAT - Growth MGMEFF - Management Effectiveness

	MARG - Margins BALSH - Balance Sheet CASH - Cash Flow DESCR - Descriptive EFFR - Efficiency Ratios INTRD - Insider Trading OWNER - Institutional Ownership PREL - Price Related PROFIT - Profitability Ratios SHARE - Share Related Items SHINT - Short Interest
SHOWTAB	Enables/Disables tabs on the displayed View.
SHOWFORM	Defines whether to show results screen in the frame or not: • If set to TRUE then the user will see the results in the frame once submit is clicked. • If set to FALSE the user will need to use their own search capability and pass all parameters into the URL for the results to show in designated frame.
XLS	Displays the button for outputting data to XLS file.
XLS_ALL	Displays the button for outputting all data to XLS file.
OUTPUT	Defines the format of the output file - either HTML or XLS.
COMPANY	(Optional) Parameter used for symbol resolution. It means you can specify 3rd-Party symbols and the application will resolve them to RICs.

Note: Users can use the &SHOWFORM=FALSE parameter to remove the input form and display only the results table.

Samples:

1. To request a financial report for Google, the user must submit the following request:

HTTP Sample Request - Google Financial Report
http://views.rkd.reuters.com/views/fundamentals/[appID]/income.aspx?ric=GOOG.O

The user gets the following Web View as a result:



Symbol:

GOOG.O

Reporting Basis:

Annual

Search

Income Statement

Balance Sheet

Cash Flow

Ratios

Export

Export All

Google Inc. - GOOG.O Income Statement

Fiscal Period	2010	2009	2008	2007	2006	2005
Period End Date:	31 December 2010	31 December 2009	31 December 2008	31 December 2007	31 December 2006	31 December 2005
Period Length:	12	12	12	12	12	12
Reporting Currency:	USD	USD	USD	USD	USD	USD
Source:	10-K	10-K	10-K	10-K	10-K	10-K
Revenue	29321	23650.56	21795.55	16593.99	10604.92	6138.56
Total Revenue	29321	23650.56	21795.55	16593.99	10604.92	6138.56
Cost of Revenue, Total	10417	8844.12	8621.51	6649.09	4225.03	2577.09
Gross Profit	18904	14806.45	13174.04	9944.9	6379.89	3561.47
Income Available to Common Excl. Extra. Items	8505	6520.45	4226.86	4203.72	3077.45	1465.4
Income Available to Common Incl. Extra. Items	8505	6520.45	4226.86	4203.72	3077.45	1465.4
Dilution Adjustment*	0	0	0	0	0	0
Diluted Net Income*	8505	6520.45	4226.86	4203.72	3077.45	1465.4
Diluted Weighted Average Shares*	323.25	319.42	317.51	316.21	309.55	291.87
Diluted EPS Excluding Extrordinary Items*	26.31	20.41	13.31	13.29	9.94	5.02
Dividends per Share - Common Stock Primary Issue	0	0	0	0	0	0
Diluted Normalized EPS	26.31	20.41	15.8	13.29	9.94	5.23



2. To request Ratios and Statistics report for Vodafone Group Plc, the user must submit the following request:

HTTP Sample Request - Vodafone Group Plc Ratios and Statistics Report

[http://views.rkd.reuters.com/views/fundamentals/\[appID\]/ratios.aspx?ric=VOD.L](http://views.rkd.reuters.com/views/fundamentals/[appID]/ratios.aspx?ric=VOD.L)

The user gets the following Web View as a result:

Symbol:	VOD.L	Search
Export		
Vodafone Group plc - VOD.L Ratios [-] Hide Details		
Ratios	Values	
Price And Volume		
Per Share Data		
Valuation		
Financial Strength		
Income Statement		
Revenue - most recent fiscal year:	44472	
Revenue - trailing 12 months:	45314	
EBITD - most recent fiscal year:	12648	
EBITD - trailing 12 months:	11621	
Earnings per Share, Normalized, Excluding Extraordinary Items, Avg. Diluted Shares Outstanding, TTM:	0.25	
Margins		
Mgmt Effectiveness		
Growth		



3. To request Income Statement report for Google using symbol resolution, the user must submit the following request:

HTTP Sample Request - Google Income Statement Report with Symbol Resolution

[http://views.rkd.reuters.com/views/fundamentals/\[appID\]/income.aspx?company=GOOG](http://views.rkd.reuters.com/views/fundamentals/[appID]/income.aspx?company=GOOG)

The user gets the following Web View as a result:

Symbol: Reporting Basis:
[Click here to verify the company selection... \[+\]](#)

[Income Statement](#) | [Balance Sheet](#) | [Cash Flow](#) | [Ratios](#)

 Export  Export All

Google Inc. - GOOG.O Income Statement

Fiscal Period	2010	2009	2008	2007	2006	2005
Period End Date:	31 December 2010	31 December 2009	31 December 2008	31 December 2007	31 December 2006	31 December 2005
Period Length:	12	12	12	12	12	12
Reporting Currency:	USD	USD	USD	USD	USD	USD
Source:	10-K	10-K	10-K	10-K	10-K	10-K
Revenue	29321	23650.56	21795.55	16593.99	10604.92	6138.56
Total Revenue	29321	23650.56	21795.55	16593.99	10604.92	6138.56
Cost of Revenue, Total	10417	8844.12	8621.51	6649.09	4225.03	2577.09
Gross Profit	18904	14806.45	13174.04	9944.9	6379.89	3561.47
Selling/General/Administrative Expenses, Total	4761	3651.24	3748.88	2740.52	1601.31	854.68
Research & Development	3762	2843.03	2793.19	2119.99	1228.59	599.51
Unusual Expense (Income)	0	0	1094.76	0	0	90
Total Operating Expense	18940	15338.38	16258.34	11509.59	7054.92	4121.28
Operating Income	10381	8312.19	5537.21	5084.4	3550	2017.28
Other, Net	6	2.37	4.52	(4.65)	3.46	4.14
Income Before Tax	10796	8381.19	5853.6	5673.98	4011.04	2141.68
Income Tax - Total	2291	1860.74	1626.74	1470.26	933.59	676.28
Income After Tax	8505	6520.45	4226.86	4203.72	3077.45	1465.4
Net Income Before Extra. Items	8505	6520.45	4226.86	4203.72	3077.45	1465.4
Net Income	8505	6520.45	4226.86	4203.72	3077.45	1465.4
Income Available to Common Excl. Extra. Items	8505	6520.45	4226.86	4203.72	3077.45	1465.4
Income Available to Common Incl. Extra. Items	8505	6520.45	4226.86	4203.72	3077.45	1465.4
Dilution Adjustment*	0	0	0	0	0	0
Diluted Net Income*	8505	6520.45	4226.86	4203.72	3077.45	1465.4
Diluted Weighted Average Shares*	323.25	319.42	317.51	316.21	309.55	291.87
Diluted EPS Excluding Extraordinary Items*	26.31	20.41	13.31	13.29	9.94	5.02
Dividends per Share - Common Stock Primary Issue	0	0	0	0	0	0
Diluted Normalized EPS	26.31	20.41	15.8	13.29	9.94	5.23



47.4.11 Estimates Web View

Estimates Web View allows the users to access the database that includes global estimates for over 15,000 active and 10,000 inactive companies. It contains all estimates types and periods that Thomson Reuters collects - the estimate types (measures) which are displayed in the view are dependant on the permission type the user ID is set to. This Web View allows clients to access the following data collected by Thomson Reuters:

- Consensus Estimates
- Actuals

- Broker Recommendations
- Price Targets

The table provided below lists the parameters which can be used by the Consensus Estimate Web View:

Parameter	Description
COMPANY	Company name. In the Thomson Reuters Estimates database each company, in the eyes of the broker, has its record. However, users of the data should be aware that for various reasons one company in the real world may have two separate records in this service. An example of such an occurrence is HSBC where there are major listings on both the London Stock Exchange and the Hong Kong Stock Exchange. Currently both listings will have separate sets of Estimates. The reason for this is that each listing will produce separate accounts based on different accounting standards and as such brokers treat them as two separate companies.
PERIODBASIS	Defines the reporting basis. Either Annual or Interim.
SHOWFORM	Defines whether to show results screen in the frame or not: • If set to TRUE then the user will see the results in the frame once submit is clicked. • If set to FALSE the user will need to use their own search capability and pass all parameters into the URL for the results to show in designated frame.
XLS	Displays the button for outputting data to XLS file.
OUTPUT	Defines the format of the output file - either HTML or XLS.
SHOWALL	Displays all periods expanded in the display.
ESTIMATEID	Estimate ID.

Samples

1. To request Estimates for Thomson Reuters, with a link to XLS output and default annual periodicity, the user must submit the following URL:

HTTP Sample Request - Thomson Reuters Estimates (Annual)

[http://views.rkd.reuters.com/views/estimates/\[appID\]/default.aspx?company=TRI&xls=true&periodbasis=annual](http://views.rkd.reuters.com/views/estimates/[appID]/default.aspx?company=TRI&xls=true&periodbasis=annual)

The following Web View will be returned in the response:

The following Web View will be returned in the response.

Symbol:
Period:

Price (27 May 2011)

Latest:

USD 38.79 U

52 Wk. High/Low:

42.15 U/33.68 U

Market cap:

32414.76 M

Enterprise Value:

39743.23 N

Beta 5Yr Monthly:

0.89 N

Target Price: USD 41.98 (U)

Estimates:

19 6

Mean:

41.98 12.97

High:

52.65 18.9

Low:

34.14 8

Std Dev:

4.74 3.51

Recommendations: HOLD (2.71)

Buy:

2

Outperform:

5

Hold:

12

Underperform:

1

Sell:

1

No Opinion:

0

Thomson Reuters Corporation (USA) - TRI.N Consensus Estimates

[+] Show Details

Export

Annual (USD)	Actual		Estimate [+]		
	Dec 2009	Dec 2010	Dec 2009	Dec 2010	Dec 2011
Earnings Per Share (Pre Exceptional) (U)	1.85	1.76	1.84	1.78	2.11
Earnings Per Share (As Reported) (U)	1.01	1.08	1.17	1.17	1.5
Cash Flow Per Share (U)	3.2	3.17	3.14	3.19	3.53
Return On Assets (P)	4.46	--	3.1	--	--
Return On Equity (P)	8.18	7.61	7.18	7.47	7.94

MAJORITY BASIS: EBITDA / EBIT / Net Profit (Pre Except) / EPS (Pre Except) exclude Amortization of other identifiable intangible assets. | MAJORITY BASIS: EBITDA / EBIT / Net Profit (Pre Except) / EPS (Pre Except) include integration costs and Stock based Compensations.



2. To request Estimates for Microsoft with interim periodicity, the user must submit the following URL:

HTTP Sample Request - Microsoft Estimates (Interim)

[http://views.rkd.reuters.com/views/estimates/\[appID\]/default.aspx?company=MSFT.O&periodbasis=interim](http://views.rkd.reuters.com/views/estimates/[appID]/default.aspx?company=MSFT.O&periodbasis=interim)

The following Web View will be returned in the response:

Symbol:	MSFT.OQ	Period:	Interim	Search

Price (31 May 2011)	Target Price: USD 32.68 (U)	Long Term Growth: 10.82%	Recommendations: OUTPERFORM (1.85)
Latest: USD 25.01 U	Estimates: 28	10	Buy: 19
52 Wk. High/Low: 29.46 U/22.73 U	Mean: 32.68	10.82	Outperform: 4
Market cap: 210903.51 M	High: 38	13	Hold: 9
Enterprise Value: 170560.3 N	Low: 25	5.4	Underperform: 1
Beta 5Yr Monthly: 1.06 N	Std Dev: 3.4	2.37	Sell: 1
			No Opinion: 1

Microsoft Corporation - MSFT.OQ Consensus Estimates [+] Show Details Export

Interim (USD)	Actual [+]		Estimate [+]		
	Dec 2010	Mar 2011	Dec 2010	Mar 2011	Jun 2011
Earnings Per Share (Pre Exceptional) (U)	0.77	0.56	0.68	0.56	0.58
Earnings Per Share (As Reported) (U)	0.77	0.61	0.69	0.56	0.58
Cash Flow Per Share (U)	0.49	1.02	0.8	0.87	0.59
Dividends Per Share (U)	0.16	0.16	0.16	0.16	0.16
Net Asset Value (U)	--	--	--	--	--
Return On Assets (P)	7.21	19.88	14.2	22.7	21.1
Return On Equity (P)	55.62	37.44	33.93	41.02	38.83
Pre-Tax Profit (Pre Exceptional) (M)	--	--	--	--	--
Pre-Tax Profit (As Reported) (M)	--	--	--	--	--

ACCOUNTING: Consensus includes stock-based compensation.



3. To request Estimates for BP in XLS output, the user must submit the following URL:

HTTP Sample Request - BP Estimates

[http://views.rkd.reuters.com/views/estimates/\[appID\]/default.aspx?company=BP.L&output=xls](http://views.rkd.reuters.com/views/estimates/[appID]/default.aspx?company=BP.L&output=xls)

As the response the user will get a pop-up window asking where to save the generated XLS file with the requested BP Estimates data.

4. To request Estimates for Microsoft using symbol resolution, the user must submit the following URL:

HTTP Sample Request - Microsoft Estimates with Symbol Resolution

[http://views.rkd.reuters.com/views/estimates/\[appID\]/default.aspx?company=MSFT](http://views.rkd.reuters.com/views/estimates/[appID]/default.aspx?company=MSFT)

The following Web View will be returned in the response:

Symbol:

MSFT

Period:

Annual

Search

Price (21 June 2011)

Latest:

USD 24.76 U

52 Wk. High/Low:

29.46 U/22.73 U

Market cap:

208795.32 M

Enterprise Value:

168114.8 N

Beta 5Yr Monthly:

1.05 N

Target Price: USD 32.71 (U)

Estimates:

28

Mean:

32.71

High:

38

Low:

25

Std Dev:

3.55

Long Term Growth:

10.82%

10

10.82

13

5.4

2.37

Recommendations: OUTPERFORM (1.88)

Buy:

18

Outperform:

5

Hold:

9

Underperform:

1

Sell:

1

No Opinion:

1

Microsoft Corporation - MSFT.OQ Consensus Estimates

[+] Show Details

Microsoft Corporation - United States of America

Export

Annual (USD)	Actual		Estimate [+]		
	Jun 2009	Jun 2010	Jun 2009	Jun 2010	Jun 2011
Earnings Per Share (Pre Exceptional) (U)	1.7	2.1	1.7	2.06	2.58
Earnings Per Share (As Reported) (U)	1.62	2.1	1.64	2.06	2.59
Cash Flow Per Share (U)	1.98	2.7	2.21	2.62	3.06
Dividends Per Share (U)	0.52	0.52	0.48	0.52	0.57
Revenue (M)	58437	62484	59758.86	61740.45	69819.52
EBITDA (M)	23343	26771	23437.74	25977.97	30078.79
Net Profit (Pre Exceptional) (M)	15095	18760	15229.73	18351.02	22105.9
Net Profit (As Reported) (M)	14569	18760	14779.46	18373.55	22148.55
EBIT (M)	20781	24098	21013.18	23442.78	27272.14
Net Debt (M)	(25701)	(30849)	(29319.89)	(40138.45)	(45529.73)
Book Value Per Share (U)	4.44	5.33	4.36	5.42	6.6
Capital Expenditure (M)	3119	1977	3122.62	1824.56	2509.15
Return On Assets (P)	20.22	22.88	20.1	20.85	22.33
Return On Equity (P)	40.18	43.76	39.15	37.01	34.45

ACCOUNTING: Consensus includes stock-based compensation.

ACCOUNTING: Consensus includes stock-based compensation.



47.4.12 Online Reports

This Web View can be used to search for online news reports and render text and pictures from the reports.

The table provided below lists the parameters which can be used for the Online Reports (headlines) Web View:

Parameter	Description
COLUMN	Specifies the number of columns that the retrieved online reports will be split into. Default value - 1 column.
MAXHEADLINES	Specifies maximum number of headlines to be retrieved. By default the value is set to 10.
OLR_DATE	Specifies the date for which Online Reports should be displayed.
OLR_FORMAT	Specifies the format in which Online Reports should be returned. Possible values: - hl - headlines (default); - hl_synop - headlines + synopsis; - hl_full - headlines in full format;
OLR_TOPIC	Specifies the topic to be searched for in Online Reports.
OLR_TOPXHL_FULL	Specifies the maximum number of Top reports to be displayed in full format.
PAGE	This parameter is used to navigate between pages. (Example: page=2)
PAGESIZE	Specifies page size.
SHOWFORM	Specifies whether to display the search form.
SID	(Optional) Cache key used for paging.

The table below shows available parameters for a single online report story:

Parameter	Description
PRINT	Displays the print link.
PRINT_ICON	Displays the print icon.

PRINT_IMG_ID	Defines whether to show or not the picture on the page.
STORY_IMG	Defines what picture to display.
STORY_IMG_SIZE	Specifies image size for the image in an online report. Possible values: • thumbnail (default) - sized 150x106 pixels; • view- 450x319 pixels; • base - 450x319 pixels;
STORYID	Specifies the story id in urn format.
SHARE_ICON	Defines whether to display share icons for social networks (facebook, twitter, digg.it, linkedin). Pr stands for print icon. Possible values are: fb, tw, di, ln, pr.
SHARE_NOTE	Adds text note to the link which will be displayed in social network.
SHARE_PORTAL_URL	Displays link to the portal, which uses Web Views.
SHARE_TITLE	Displays link title (if available).
SHARE_TOOL	Defines whether to display the share tools on a web view.
SHARE_TOOL_STYLE	Possible values: single, line, linemedium.

Note: The Social Widget (share tool) is a tool which allows the user to share public news stories via specific social networks - Facebook, Twitter, LinkedIn and Digg.

To display a news story, the user should click a headline from the response or construct the following URL if they know the StoryID parameter:

```
/views/online-reports/[appID]/story.aspx?print=[value1]&print_icon=[value2]&print_img_id=[value3]&story_img=[value4]&story_img_size=[value5]&storyid=[storyID]
```

Samples

1. This example searches Online Reports for U.S. top news with 3 TopX stories:

HTTP Sample Request - U.S. Top News with 3 TopX Stories
http://views.rkd.reuters.com/views/online-reports/[appID]/headlines.aspx?olr_topic=OLUSTOPNEWS&olr_topxhl_full=3&olr_date=false

The user gets the following Web View as a result:



Region:	U.S Online Report	Topic:	Top News	Search

Top News



Lockheed says thwarted "tenacious" cyber attack

29 May 2011 01:49:23 - IDS

By Jim Wolf WASHINGTON (Reuters) - Lockheed Martin Corp., the U.S. government's top information technology provider, said on Saturday it had thwarted "a significant and tenacious attack" on its information systems network a week ago but was still working to restore employee access. No customer, program or employee personal data was compromised thanks to "almost immediate" protective...



Cooling system restored at Tepco's No.5 plant

29 May 2011 00:42:29 - IDS

TOKYO (Reuters) - Tokyo Electric Power has restored the cooling system of the nuclear reactor and fuel pool at the No. 5 unit of the crippled Fukushima Daiichi power plant in northeastern Japan, an official of the plant operator said on Sunday. Tokyo Electric, known as TEPCO, said the cooling facility restarted at 12:49 p.m. (0349 GMT) and was expected to lower temperatures which had risen at the reactor and fuel pool after the cooling...



Greece denies missed fiscal targets as EU bickers

28 May 2011 19:25:31 - IDS

By Angeliki Koutantou and Annika Breidhardt ATHENS/BERLIN (Reuters) - Greece's hopes of averting default dimmed on Saturday as fears grew the country may have missed fiscal targets set by its lenders while euro zone policymakers bickered on how to respond to the deepening crisis. The country's finance minister denied a report in German weekly magazine Spiegel that international

inspectors will...

More Top News

- Suicide blast kills powerful Afghan police chief
- Egypt eases travel restrictions for Gaza travelers
- Obama reaffirms U.S. security pledge to ally Poland
- Yemeni government and tribesmen agree truce
- Einhorn may become majority owner of Mets: reports
- Lockheed says thwarted "tenacious" cyber attack



2. This example searches Online Reports for Brazilian Entertainment News in full format:

HTTP Sample Request - Brazilian Entertainment News in Full Format

```
http://views.rkd.reuters.com/views/online-reports/[appID]/headlines.aspx?
olr_topic=OLGBRENT&column=3&olr_format=hl_full&maxheadlines=25&pagesize=9&story_img_size=view
```

The user gets the following Web View as a result:

Region: Topic:

Entertainment

ESTREIA-Em "Novo Despertar", é difícil separar Gibson de papel
26 May 2011 12:31:38 - IDS

SÃO PAULO (Reuters) - Como separar o Mel Gibson ator do Mel Gibson que, fora das telas, vive trocando os pés pelas mãos, falando besteiras e se envolvendo em confusão? A tarefa não é fácil e seu novo filme, "Um Novo Despertar", sequer se dá ao trabalho de pedir ao público que faça essa diferenciação. Pois, até onde se vê, o protagonista possui muitas tintas que parecem vindas da palheta do ator...

ESTREIA-Literatura une personagens em "Tardes com Marguerite"
26 May 2011 12:39:46 - IDS

SÃO PAULO (Reuters) - "Minhas Tardes com Marguerite" traz um tema caro ao cinema: a amizade entre estranhos. A maior qualidade desse longa francês é o desempenho de seus dois protagonistas, Gérard Depardieu e a nonagenária Gisèle Casadesus. Eles tornam verossímeis dois personagens que muito facilmente cairiam no clichê. Dirigido e roteirizado por Jean Becker -- a partir de um romance de Marie-Sabine Roger --, o longa tem...

Oprah Winfrey se despede de programa com simplicidade e gratidão
25 May 2011 15:30:07 - IDS

Por Matthew Lewis CHICAGO (Reuters) - Não houve convidados, nem presentes, nem transformações de espectadoras. Oprah Winfrey iniciou seu último episódio do "The Oprah Winfrey Show" dizendo à plateia presente no estúdio que o programa seria algo simples, sem celebridades, e que teria como foco o que o público significou para ela ao longo dos anos. "Vocês e...

Page 1 2

 REUTERS

3. This example searches Online Reports for UK entertainment with 4 TopX stories and synopsis format:

HTTP Sample Request - UK Entertainment with 4 TopX Stories and Synopsis Format
<pre>http://views.rkd.reuters.com/views/online-reports/[appID]/headlines.aspx? olr_topic=OLCACOUNTRY&column=3&olr_format=hl_full&maxheadlines=25&pagesize=9&story_img_size=view</pre>

The user gets the following Web View as a result:

Region:
UK Online Report
Topic:
Entertainment
Search

Entertainment



Deep-voiced Scotty McCreery wins "American Idol"

26 May 2011 00:46:44 - IDS

By Nichola Groom LOS ANGELES (Reuters) - Deep-voiced country singer Scotty McCreery won the tenth season of "American Idol" on Wednesday, defeating rival Lauren Alaina who had been dubbed the front-runner by the show's judges heading into the night. McCreery, 17, hugged the other "Idol" contestants from the season and his family after host Ryan Seacrest proclaimed him the winner...



Cheryl Cole reported out as U.S. "X Factor" judge

26 May 2011 00:00:40 - IDS

LOS ANGELES (Reuters) - Cheryl Cole was reported on Wednesday to have been dropped as a judge on the U.S. version of TV singing contest "The X Factor". Celebrity websites TMZ.com and Us Weekly quoted unnamed sources as saying Cole, 27, a member of the British pop band "Girls Aloud", was being replaced in the new Fox television venture created by Simon Cowell. Fox said it had no information...

More Entertainment

Bond back in novel penned by American bestseller

25 May 2011 11:46:55 - IDS

By Mike Collett-White LONDON (Reuters) - Fittingly for the launch of the new authorised James Bond novel "Carte Blanche," there was a luxury car, champagne on tap, crack British troops abseiling from the rafters and a long-legged girl on a vintage motorbike. The promotion of American crime writer Jeffery Deaver's book about 007 and his latest escapades, which hits shelves on Thursday, was...

Baritone Finley - "I could have sung all night"

26 May 2011 11:14:09 - IDS

By Michael Roddy LONDON (Reuters) - There were circus performers on stage for the Glyndebourne premiere of Wagner's epically long "Die Meistersingers von Nuremberg" last Saturday, but the real high-wire act was baritone Gerald Finley singing the main part. The music press and the blogosphere had been abuzz for weeks about whether Finley's not-epically-huge voice would be up to tackling...



4. This example shows a single story from UK entertainment:

HTTP Sample Request - Single Story from UK Entertainment

```
http://views.rkd.reuters.com/views/onlinereports/[appID]/story.aspx?
olr_topic=OLGBENT&olr_topxhl_full=4&column=2&olr_format=hl_synop&maxheadlines=15&storyid=
urn%3anewsml%3aonlinereport.com%3a20110112%3anTRE70B06J20110112003009%3a137
```

The user gets the following Web View as a result:

Steven Tyler says Aerosmith not dead, plans new album



11 January 2011 19:30 - IDS



REUTERS



LOS ANGELES (Reuters) - Veteran rocker Steven Tyler on Tuesday denied that his new role as a judge on 'American Idol' meant the death of his band Aerosmith, and said he wanted to start work on a much-delayed new album later this month.

"We are just on a break. We are still rocking big time," Tyler, 62, told television journalists, while promoting the new season of "American Idol".

Aerosmith has not recorded a studio album since 2001 and a 2009 feud between Tyler and his bandmates threatened to break up the group known as the "bad boys of Boston".

(Reporting by Jill Serjeant; Editing by Bob Tourtellotte)

5. This example shows a single Online Reports story with Social Widget:

HTTP Sample Request - Online Reports Story with Social Widget

```
http://views.rkd.reuters.com/views/online-reports/[appID]/story.aspx?
olr_topic=OLGBENT&olr_topxhl_full=4&column=2&olr_format=hl_synop&maxheadlines=15&storyid=urn%3anewsml%3aonlinereport.com%
3a20110617%3anTRE75G2ND20110617230801%3a1&
share_tool=true&share_icon=fb%7ctw%7cdi%7cln&share_tool_style=line
```

Note: The Social Widget (share tool) is a tool which allows the user to share public news stories via specific social networks - Facebook, Twitter, LinkedIn and Digg.

The user gets the following Web View as a result:

Susan Boyle story to be turned into musical



17 June 2011 19:08 - IDS



REUTERS



LONDON (Reuters) - Scottish singer Susan Boyle, who shot to stardom in 2009 when her performance on a television singing contest became an internet hit, will see her life portrayed on stage in a new musical.

"I Dreamed a Dream," named after the title of the song she sang that made her an overnight celebrity, will tour internationally from 2012 after premiering at Theatre Royal in Newcastle on March 23.

"I never thought my life story would end up on the stage but a lot has happened in two years and it is a very exciting prospect," Boyle said.

"I hope everyone enjoys the show and I promise there will be a few surprises along the way," she added in a statement.

Boyle will be played by actress Elaine Smith, best known for her role in the comedy series "Rab C Nesbitt" and a favourite of the singer.

According to the Daily Telegraph, a 26-week tour of the Britain, the United States and Australia has been lined up so far.

(Reporting by Mike Collett-White, editing by Paul Casciato)

47.4.12.1 Online Reports 2

This Web View is similar to Online Reports Web View but uses Cooper style design.

The table provided below lists the parameters which can be used for the Online Reports 2 (headlines2) Web View:

Parameter	Description
COUNTRY	Allows you to select a country from the list of countries that have TOP NEWS.
MAXHEADLINES	Specifies maximum number of headlines to be retrieved. By default the value is set to 10.



THOMSON REUTERS

OLR_DATE	Specifies the date for which Online Reports should be displayed.
OLR_TOPXHL_FULL	Specifies the maximum number of Top reports to be displayed in full format.
SHOWFORM	Specifies whether to display the search form.

This example searches Online Reports for Spain top news:

HTTP Sample Request - Spain Top News (Cooper Style)
http://views.rkd.reuters.com/views/online-reports/[appID]/headlines2.aspx?country=Spain&customcssname=mainolr

The user gets the following Web View as a result:



This example searches Online Reports for Spain Top News with 10 stories in full format:

HTTP Sample Request - Spain 10 Top News in Full Format (Cooper Style)
http://views.rkd.reuters.com/views/online-reports/[appID]/headlines2.aspx?country=Spain&customcssname=mainolr&olr_topxhl_full=10

The user gets the following Web View as a result:

Top News
Spain

25 January 2012 01:23



Obama insta a gravar a los r...



El FMI prevé que España in...



Un tribunal neozelandés nie...



El Mirandés da la sorpresa y...



Las ventas de Apple se disp...



Liga Árabe acude a la ONU...



El abogado de Garzón pide...



Fernando Trueba y Aberto L.



La cumbre del clima de la O...



Sindicatos y patronal logran...

Obama insta a gravar a los ricos y ayudar a los dueños de casas

WASHINGTON (Reuters) - El presidente Barack Obama pidió el martes impuestos más altos para los ricos y nuevas soluciones para la crisis hipotecaria estadounidense en un discurso del Estado de la Unión marcadamente populista orientado a convencer a los votantes a que le den un segundo mandato. Hablando ante el Congreso y al electorado más amplio, Obama propuso cambios radicales al código tributario - principalmente, una tasa efectiva... [Read More](#)


REUTERS



47.4.12.2 Online Reports Story 2

This Web View is similar to Online Reports Story Web View but uses Cooper style design.

The table below shows available parameters for a single online report story 2:

Parameter	Description
COUNTRY	Allows you to select a country from the list of countries that have TOP NEWS.
PRINT_ICON	Displays the print icon.
STORY_IMG	Defines what picture to display.
STORYID	Specifies the story id in urn format.

To display a news story, the user should click a headline from the response or construct the following URL if they know the StoryID parameter:

```
/views/online-reports/[appID]/story2.aspx?country=[value1]&print_icon=[value2]&story_img=[value3]&storyid=[storyID]
```

This example shows Spain Top Story:

HTTP Sample Request - Spain Top Story
<pre>http://views.rkd.reuters.com/views/online-reports/[appID]/story2.aspx?country=Spain&customcssname=mainolr&storyid=urn%3anewsm%3aonlinereport.com%3a20120125%3anRTROPT20120125062326MAE80006%3a154</pre>

The user gets the following Web View as a result:



47.4.13 Lipper

The library of Lipper Web Views allows users to access the entire universe of Lipper data and services.

Currently, the Lipper Library contains the following Web Views:

- **Asset Allocation** - gets asset's allocation details.
- **Asset Attributes** - gets asset's list of attributes details.
- **Asset Summary** - gets asset's summary details.
- **Benchmark** - gets the benchmark for the given benchmark category and asset(s).
- **Charges** - gets the information about various charges paid by the given asset(s) as of the given effective date.
- **Countries Registered for Sale** - gets a list of the countries where the given assets are registered for sale.
- **Cross References** - gets the cross-reference information (asset identifier and Lipper ID) for the given cross-reference code.
- **Lipper Leader Score** - gets Lipper Leader Scores for the given asset(s) based on the universe and data date.
- **Minimum Investment** - gets minimum investment data for the given asset(s).
- **Objective** - gets objective information for the give asset(s).
- **Support Companies** - gets company information for the given asset(s) and company role.
- **Technical Analysis** - gets technical analysis information for the given asset(s).
- **TotalNetAsset History** - gets a detailed list of the Total Net Asset (TNA) values for the specified period for the given asset(s).
- **Top10 Holdings** - gets the list of 10 top-performing holdings.
- **Classifications** - gets all of the classification information for the given asset(s), including classification schemes and the corresponding classification types.
- **Performance Header** - gets performance headers for the given asset(s).
- **European Union Tax Directive** - gets EU tax directive information for the given asset(s).
- **Search** - allows the client to look for an asset based on several types of characteristics.
- **Overview** - allow the user to retrieve a wide range of basic Lipper fund data.
- **Top Performing Funds (All)** - gets the list of top/best performing funds (based on year-to-date performance).
- **Bottom Performing Funds (All)** - gets the list of bottom/worst performing funds (based on year-to-date performance).
- **Top Performing Funds (by LGC)** - gets the list of top/best performing funds by Lipper Global Classification Schema.
- **Bottom Performing Funds (by LGC)** - gets the list of bottom/worst performing funds by Lipper Global Classification Schema.
- **Comparative Performance** - gets comparative performance for the specified funds.
- **Newly Available Funds** - gets the list of funds recently added to Lipper database.
- **Calendar Year Performance** - gets the performance information for the specified fund for the current year.

47.4.13.1 Lipper Asset Allocation

This Web View can be used to display allocation details for a specific fund.

The table provided below lists the parameters which can be used for the Lipper Asset Location Web View:

Parameter	Description
ALLOCATION	The allocation scheme. For full listing of allocation schemes see section Allocation Enumeration in the Lipper Data Enumerations section.
ERROR	(Optional) TRUE / FALSE. If set to FALSE - the application will display only available/identifiable funds in the rendered view. If set to TRUE - the application will display available/identifiable funds and notify the user about invalid funds at the bottom of the rendered view.
LANGUAGE	The display language for the collected allocations data. Possible values: languagenneutral, chinesesimplified, chinesetaiwan, traditionalchinese, dutch, english, french, german, italian, japanese, korean, spanish, thai.
LIPPERIDS	A unique eight- or nine-digit number that identifies an asset.

To display Lipper Asset Allocation Web View, the user can construct the following URL by using the table above:

```
http:[views_server]/views/lipper/[appID]/assetallocation.aspx?allocation=[value1]&error=[value2]&language=[value3]&lipperids=[value4|value5|valueN]
```

This example searches for the specified funds:

HTTP Sample Request - Asset Allocation

```
http://views.rkd.reuters.com/views/lipper/[appID]/assetallocation.aspx?lipperids=40000700 | 40000255 | 40007925&allocation=All
```

The user gets the following Web View as a result:

Asset Allocation

[+] Expand All	
American Funds Bond Fund of America;A	[-]
Debtor Quality [+]	
Maturity [+]	
HLDG Top Holdings [+]	
Neuberger Berman Mid Cap Growth Fund;Investor	[+]
Russell US Quantitative Equity Fund;I	[+]



47.4.13.2 Lipper Asset Attributes

This Web View can be used to retrieve a detailed list of attributes for the specified asset(s). Attributes are basic characteristics of a fund, like asset type, status, universe, etc.

The table provided below lists the parameters which can be used for the Lipper Asset Attributes Web View:

Parameter	Description
ERROR	(Optional) TRUE / FALSE. If set to FALSE - the application will display only available/identifiable funds in the rendered view. If set to TRUE - the application will display available/identifiable funds and notify the user about invalid funds at the bottom of the rendered view.
LANGUAGE	The display language for the collected attributes data. Possible values: languageneutral, chinesesimplified, chinesetaiwan, traditionalchinese, dutch, english, french, german, italian, japanese, korean, spanish, thai.
LIPPERIDS	A unique eight- or nine-digit number that identifies an asset.

To display Lipper Asset Attributes Web View, the user can construct the following URL by using the table above:

```
http:[views_server]/views/[appID]/lipper/assetattributes.aspx?error=[value1]&language=[value2]&lipperids=[value3 | value4 | valueN]
```

This example searches for the specified funds:

HTTP Sample Request - Asset Attributes

```
http://views.rkd.reuters.com/views/lipper/[appID]/assetattributes.aspx?lipperids=40000700 | 40000255 | 40007925
```

The user gets the following Web View as a result:

Asset Attributes

[+] Expand All	
American Funds Bond Fund of America;A	[-]
Corporate Bond	Yes
Lipper Primary Sh Cl	Yes
Reinvests on x-date	Yes
Neuberger Berman Mid Cap Growth Fund;Investor	[+]
Russell US Quantitative Equity Fund;I	[+]



47.4.13.3 Lipper Asset Summary

This Web View can be used to display summary details for a specific fund.

The table provided below lists the parameters which can be used for the Lipper Asset Summary Web View:

Parameter	Description
CURRENCY	The currency for the returned data. For full listing of available currency codes, see section Currency Code Enumeration in the Lipper Data Enumerations chapter. Default - USD.
ERROR	(Optional) TRUE / FALSE. If set to FALSE - the application will display only available/identifiable funds in the rendered view. If set to TRUE - the application will display available/identifiable funds and notify the user about invalid funds at the bottom of the rendered view.
LANGUAGE	The display language for the collected data. Possible values: languagenutral, chinesesimplified, chinesetaiwan, traditionalchinese, dutch, english, french, german, italian, japanese, korean, spanish, thai.
LIPPERIDS	The asset identifier of a particular collective investment within Lipper.

To display Lipper Asset Summary Web View, the user can construct the following URL by using the table above:

`http:[views_server]/views/lipper/[appID]/assetsummary.aspx?currency=[value1]&error=[value2]&language=[value3]&lipperids=[value4|value5|valueN]`

This example searches for the specified funds:

HTTP Sample Request - Asset Summary
<code>http://views.rkd.reuters.com/views/lipper/[appID]/assetsummary.aspx?lipperids=40000700 40000255 40007925</code>

The user gets the following Web View as a result:



Asset Summary

		[+] Expand All
American Funds Bond Fund of America;A		[-]
Fund Type	Bond	
Geographical Focus	United States of America	
Launch Date	28 May 1974	
Domicile	USA	
Currency	USD	
NAV	12.18 USD	
TNA (Total Net Assets) 31 December 2010	25627.3 mil USD	
Asset Status	Active	
Manager	Team Managed	
Income Distribution	Paid	
Dividends Per Year	0	
Neuberger Berman Mid Cap Growth Fund;Investor		[+]
Russell US Quantitative Equity Fund;I		[+]



47.4.13.4 Lipper Benchmark

This Web View can be used to display the benchmark for the given asset(s).

A benchmark is a standard against which the performance of a security, index or investor can be measured.

The table provided below lists the parameters which can be used for the Lipper Benchmark Web View:

Parameter	Description
ERROR	(Optional) TRUE / FALSE. If set to FALSE - the application will display only available/identifiable funds in the rendered view. If set to TRUE - the application will display available/identifiable funds and notify the user about invalid funds at the bottom of the rendered view.
LANGUAGE	The display language for the returned data. Possible values: languageneutral, chinesesimplified, chinesetaiwan, traditionalchinese, dutch, english, french, german, italian, japanese, korean, spanish, thai.
LIPPERIDS	A Lipper ID is a unique eight- or nine-digit number (e.g., 60003333) that identifies a collective investment.

To display Lipper Benchmarks Web View, the user can construct the following URL by using the table above:

`http://views_server/views/[appID]/lipper/benchmarks.aspx?error=[value1]&language=[value2]&lipperids=[value3 | value4 | valueN]`

This example searches for the benchmarks for the specified funds:

HTTP Sample Request - Lipper Benchmarks
<code>http://views.rkd.reuters.com/views/lipper/[appID]/benchmarks.aspx?lipperids=40000700 40000255 40007925</code>

The user gets the following Web View as a result:

Benchmarks

[+] Expand All	
American Funds Bond Fund of America;A	[-]
AssetManager	Bardays Capital U.S. Aggregate Bond TR
RiskFreeIndex	US Treasury Bills 3 Months TR
TechnicalIndicator	BofA Merrill Lynch U.S. Corporate Master TR
Neuberger Berman Mid Cap Growth Fund;Investor	[+]
Russell US Quantitative Equity Fund;I	[+]



47.4.13.5 Lipper Charges

This Web View can be used to display the information about various charges paid by the given asset(s) as of the given effective date.

The table provided below lists the parameters which can be used for the Lipper Charges Web View:

Parameter	Description
EFFECTIVE_DATE	The effective date for the charges data.
ERROR	(Optional) TRUE / FALSE. If set to FALSE - the application will display only available/identifiable funds in the rendered view. If set to TRUE - the application will display available/identifiable funds and notify the user about invalid funds at the bottom of the rendered view.
LANGUAGE	Display language for the returned data. Possible values: languagenutral, chinesesimplified, chinesetaiwan, traditionalchinese, dutch, english, french, german, italian, japanese, korean, spanish, thai.
LIPPERIDS	A Lipper ID is a unique eight- or nine-digit number (e.g., 60003333) that identifies a collective investment.

To display Lipper Charges Web View, the user can construct the following URL by using the table above:

`http:[views_server]/views/lipper/[appID]/charges.aspx?effective_date=[value1]&error=[value2]&language=[value3]&lipperids=[value4|value5|valueN]`

This example searches for the specified funds:

HTTP Sample Request - Lipper Charges
<code>http://views.rkd.reuters.com/views/lipper/[appID]/charges.aspx?lipperids=40000700 40000255 40007925</code>

The user gets the following Web View as a result:



Charges (%)

[+] Expand All

American Funds Bond Fund of America;A				[-]	
Type	Min	Max	Current		
12b-1 Fee Maximum Percentage Expenses	--	0.25	--		
12b-1 Marketing Expense	--	--	0.25		
Advisor Expense	--	--	0.23		
Annual	--	--	0.23		
Custodian Expense	--	--	0		
Director Expense	--	--	0		
Foreign Tax Expense	--	--	0		
Initial	--	3.75	3.75		
Miscellaneous Expense	--	--	0		
Postage and Printing Expense	--	--	0.01		
Registration Expenses	--	--	0.02		
Tax Expense	--	--	0		
TER Master Feeder	--	--	0.65		
Total Expense Published	--	--	0.65		
Total Gross Expense	--	--	0.65		
Total Net Expense	--	--	0.65		
Transfer Agent Expense	--	--	0.13		
Neuberger Berman Mid Cap Growth Fund;Investor				[+]	
Russell US Quantitative Equity Fund;I				[+]	



47.4.13.6 Lipper Countries Registered For Sale

This Web View can be used to display a list of the countries where the given assets are registered for sale.

The table provided below lists the parameters which can be used for the Lipper Countries Registered for Sale Web View:

Parameter	Description
ERROR	(Optional) TRUE / FALSE. If set to FALSE - the application will display only available/identifiable funds in the rendered view. If set to TRUE - the application will display available/identifiable funds and notify the user about invalid funds at the bottom of the rendered view.
LANGUAGE	The display language for the returned data. Possible values: languageneutral, chinesesimplified, chinesetaiwan, traditionalchinese, dutch, english, french, german, italian, japanese, korean, spanish, thai.
LIPPERIDS	A Lipper ID is a unique eight- or nine-digit number (e.g., 60003333) that identifies a collective investment.

To display Lipper Countries Registered for Sale Web View, the user can construct the following URL by using the table above:

http:[views_server]/views/lipper/[appID]/countriesregisteredforsale.aspx?error=[value1]&language=[value2]&lipperids=[value3|value4|valueN]

This example searches for the specified funds:

HTTP Sample Request - Countries Registered for Sale



[http://views.rkd.reuters.com/views/lipper/\[appID\]/countriesregisteredforsale.aspx?lipperids=40000700|40000255|40007925](http://views.rkd.reuters.com/views/lipper/[appID]/countriesregisteredforsale.aspx?lipperids=40000700|40000255|40007925)

The user gets the following Web View as a result:

Countries Registered for Sale

[+] Expand All

American Funds Bond Fund of America;A	[-]
United States	
Neuberger Berman Mid Cap Growth Fund;Investor	[+]
Russell US Quantitative Equity Fund;I	[+]



47.4.13.7 Lipper Cross References

This Web View can be used to display cross-reference information (asset identifier and Lipper ID) for the given cross-reference code.

The table provided below lists the parameters which can be used for the Lipper Cross References Web View:

Parameter	Description
BLOCK_SIZE	Defines the size of blocks in which the data will be returned. Default value - 3.
ERROR	(Optional) TRUE / FALSE. If set to FALSE - the application will display only available/identifiable funds in the rendered view. If set to TRUE - the application will display available/identifiable funds and notify the user about invalid funds at the bottom of the rendered view.
LANGUAGE	The display language for the returned data. Possible values: languageneutral, chinesesimplified, chinesetaiwan, traditionalchinese, dutch, english, french, german, italian, japanese, korean, spanish, thai.
LIPPERIDS	A Lipper ID is a unique eight- or nine-digit number (e.g., 60003333) that identifies a collective investment.

To display Lipper Cross References Web View, the user can construct the following URL by using the table above:

[http://views_server/views/lipper/\[appID\]/crossreferences.aspx?blocksize=\[value2\]&error=\[value3\]&language=\[value4\]&lipperids=\[value5|value6|valueN\]](http://views_server/views/lipper/[appID]/crossreferences.aspx?blocksize=[value2]&error=[value3]&language=[value4]&lipperids=[value5|value6|valueN])

This example searches for the specified funds:

HTTP Sample Request - Cross References
http://views.rkd.reuters.com/views/lipper/[appID]/crossreferences.aspx?lipperids=40000700 40000255 40007925

The user gets the following Web View as a result:

Cross References

			[+] Expand All
American Funds Bond Fund of America;A			[-]
CUSIP	CUSIP	097873103	
LAS_DS_PORTNO	LAS_DS Portfolio No	1007076	
US_CLASS_NO	LAS_DS_CLASS_NO	2014092	
			All...
Neuberger Berman Mid Cap Growth Fund;Investor			[+]
Russell US Quantitative Equity Fund;I			[+]



47.4.13.8 Lipper Leader Score Card

This Web View can be used to display Lipper Leader Scores for the given asset(s) based on the universe and data date.

The table provided below lists the parameters which can be used for the Lipper Leader Score Card Web View:

Parameter	Description
EFFECTIVE_DATE	The effective date for which Lipper Leader score data will be returned.
ERROR	(Optional) TRUE / FALSE. If set to FALSE - the application will display only available/identifiable funds in the rendered view. If set to TRUE - the application will display available/identifiable funds and notify the user about invalid funds at the bottom of the rendered view.
LANGUAGE	The display language for the returned data. Possible values: languageneutral, chinesesimplified, chinesetaiwan, traditionalchinese, dutch, english, french, german, italian, japanese, korean, spanish, thai.
LEAD_SCORE_SIZE	Defines the size of leader score. Possible values are medium/large. Default is medium.
LIPPERIDS	A Lipper ID is a unique eight- or nine-digit number (e.g., 60003333) that identifies a collective investment.
UNIVERSE	The code that represents the Universe, for which the Lipper Leader Scores will be returned. For the list of available Universes, see the Universe Enumeration section in the Lipper Data Enumerations chapter.

Note: Lipper Leader Scores are derived from highly sophisticated formulas that analyze funds against clearly defined criteria. Funds are compared to similar funds, and only those that truly stand out are awarded Lipper Leader status. There are five Lipper Leader Score Categories: Consistent Return, Expense, Preservation, Tax Efficiency, and Total Return. For each of these categories, there are three year, five year, ten year, and overall scores. Funds are rated on a numeric scale of 5 to 1; 5 represents funds with the highest rating, and 1 represents the lowest rating.

To display Lipper Leader Score Card Web View, the user can construct the following URL by using the table above:

`http://[views_server]/views/lipper/[appID]/leaderscorecard.aspx?effective_date=[value1]&error=[value2]&language=[value3]&lead_score_size=[value4]&lipperids=[value5|value6|valueN]&universe=[value7]`

This example searches for the specified funds:

HTTP Sample Request - Leader Score Card

`http://views.rkd.reuters.com/views/lipper/[appID]/leaderscorecard.aspx?lipperids=40000700|40000255|40007925`

The user gets the following Web View as a result:





47.4.13.9 Lipper Leader Score Card 2

This Web View can be used to display Lipper Leader Scores for the given asset(s) based on the universe and data date.

The only difference between Lipper Leader Score Card and Lipper Leader Score Card 2 is the data orientation (horizontal/vertical).

The table provided below lists the parameters which can be used for the Lipper Leader Score Card 2 Web View:

Parameter	Description
EFFECTIVE_DATE	The effective date for which Lipper Leader score data will be returned.
ERROR	(Optional) TRUE / FALSE. If set to FALSE - the application will display only available/identifiable funds in the rendered view. If set to TRUE - the application will display available/identifiable funds and notify the user about invalid funds at the bottom of the rendered view.
LANGUAGE	The display language for the returned data. Possible values: languagenutral, chinesesimplified, chinesetaiwan, traditionalchinese, dutch, english, french, german, italian, japanese, korean, spanish, thai.
LEAD_SCORE_SIZE	Defines the size of leader score. Possible values are medium/large. Default is medium.
LIPPERIDS	A Lipper ID is a unique eight- or nine-digit number (e.g., 60003333) that identifies a collective investment.
UNIVERSE	The code that represents the Universe, for which the Lipper Leader Scores will be returned. For the list of available Universes, see the Universe Enumeration section in the Lipper Data Enumerations chapter.

To display Lipper Leader Score Card 2 Web View, the user can construct the following URL by using the table above:

`http://views_server/views/lipper/[appID]/leaderscorecard2.aspx?effective_date=[value1]&error=[value2]&language=[value3]&lead_score_size=[value4]&lipperids=[value5|value6|valueN]&universe[value7]`

This example searches for the specified funds:

HTTP Sample Request - Leader Score Card 2
<code>http://views.rkd.reuters.com/views/lipper/[appID]/leaderscorecard2.aspx?lipperids=40000700 40000255 40007925</code>

The user gets the following Web View as a result:



47.4.13.10 Lipper Minimum Investment

This Web View can be used to retrieve minimum investment data for the given asset(s).

The table provided below lists the parameters which can be used for the Lipper Minimum Investment Web View:

Parameter	Description
ERROR	(Optional) TRUE / FALSE. If set to FALSE - the application will display only available/identifiable funds in the rendered view. If set to TRUE - the application will display available/identifiable funds and notify the user about invalid funds at the bottom of the rendered view.
LANGUAGE	The display language for the returned data. Possible values: languageneutral, chinesesimplified, chinesetaiwan, traditionalchinese, dutch, english, french, german, italian, japanese, korean, spanish, thai.
LIPPERIDS	A Lipper ID is a unique eight- or nine-digit number (e.g., 60003333) that identifies a collective investment.

To display Lipper Minimum Investment Web View, the user can construct the following URL by using the table above:

[http://\[views_server\]/views/lipper/\[appID\]/minimuminvestment.aspx?error=\[value1\]&language=\[value2\]&lipperids=\[value3|value4|valueN\]](http://[views_server]/views/lipper/[appID]/minimuminvestment.aspx?error=[value1]&language=[value2]&lipperids=[value3|value4|valueN])

This example searches for the specified funds:

HTTP Sample Request - Lipper Minimum Investment

[http://views.rkd.reuters.com/views/lipper/\[appID\]/minimuminvestment.aspx?lipperids=40000700|40000255|40007925](http://views.rkd.reuters.com/views/lipper/[appID]/minimuminvestment.aspx?lipperids=40000700|40000255|40007925)

The user gets the following Web View as a result:

Minimum Investment

[+] Expand All

American Funds Bond Fund of America;A				[-]
Unit	Initial	Regular	Irregular	
USD	250	50	--	
Neuberger Berman Mid Cap Growth Fund;Investor				[+]
Russell US Quantitative Equity Fund;I				[+]



47.4.13.11 Lipper Objective

This Web View can be used to display asset's objective details.

The table provided below lists the parameters which can be used for the Lipper Objective Web View:

Parameter	Description
LANGUAGE	The display language for the returned data. Possible values: languageneutral, chinesesimplified, chinesetaiwan, traditionalchinese, dutch, english, french, german, italian, japanese, korean, spanish, thai.
LIPPERID	A Lipper ID is a unique eight- or nine-digit number (e.g., 60003333) that identifies a collective investment.

To display Lipper Objective Web View, the user can construct the following URL by using the table above:

[http://views_server/views/lipper/\[appID\]/objective.aspx?language=\[value1\]&lipperid=\[value2\]](http://views_server/views/lipper/[appID]/objective.aspx?language=[value1]&lipperid=[value2])

This example searches for the specified funds:

HTTP Sample Request - Lipper Objective
http://views.rkd.reuters.com/views/lipper/[appID]/objective.aspx?lipperid=40000700

The user gets the following Web View as a result:

Objective

The Fund seeks to provide as high a level of current income as is consistent with the preservation of capital. The Fund seeks to maximize the level of current income and preserve capital by investing primarily in bonds. The Fund invests at least 80% of its assets in bonds and other debt securities.



47.4.13.12 Lipper Support Companies

This Web View can be used to display company information and company role for the given asset(s).

The table provided below lists the parameters which can be used for the Lipper Support Companies Web View:

Parameter	Description
ERROR	(Optional) TRUE / FALSE. If set to FALSE - the application will display only available/identifiable funds in the rendered view. If set to TRUE - the application will display available/identifiable funds and notify the user about invalid funds at the bottom of the rendered view.
LANGUAGE	The display language for the returned data. Possible values: languageneutral, chinesesimplified, chinesetaiwan, traditionalchinese, dutch, english, french, german, italian, japanese, korean, spanish, thai.
LIPPERIDS	A Lipper ID is a unique eight- or nine-digit number (e.g., 60003333) that identifies a collective investment.

To display Lipper Support Companies Web View, the user can construct the following URL by using the table above:

[http://views_server/views/lipper/\[appID\]/supportcompanies.aspx?error=\[value1\]&language=\[value2\]&lipperids=\[value3|valueN\]](http://views_server/views/lipper/[appID]/supportcompanies.aspx?error=[value1]&language=[value2]&lipperids=[value3|valueN])

This example searches for the specified funds:

HTTP Sample Request - Lipper Support Companies
http://views.rkd.reuters.com/views/lipper/[appID]/supportcompanies.aspx?lipperids=40000700 40000255 40007925

The user gets the following Web View as a result:

Support Companies	
[+] Expand All	
American Funds Bond Fund of America;A [-]	
Custodian	JP Morgan Chase Bank NA
Advisor	Capital Research & Management Company
FundManagementCompany	Capital Research & Management Company
Promoter	American Funds
Neuberger Berman Mid Cap Growth Fund;Investor	[+]
Russell US Quantitative Equity Fund;I	[+]



47.4.13.13 Lipper Technical Analysis

This Web View can be used to retrieve technical analysis data for a specific fund.

The table provided below lists the parameters which can be used for the Lipper Asset Location Web View:

Parameter	Description
CURRENCY	The currency for the returned price. For full listing of available currency codes, see section Currency Code Enumeration in the Lipper Data Enumerations chapter.
LANGUAGE	The display language for the returned data. Possible values: languageneutral, chinesesimplified, chinesetaiwan, traditionalchinese, dutch, english, french,



	german, italian, japanese, korean, spanish, thai.
LIPPERID	A Lipper ID is a unique eight- or nine-digit number (e.g., 60003333) that identifies a collective investment.

To display Lipper Technical Analysis Web View, the user can construct the following URL by using the table above:

`http://[views_server]/views/lipper/[appID]/technicalanalysis.aspx?currency=[value1]&language=[value2]&lipperid=[value3]`

This example searches for the specified funds:

HTTP Sample Request - Lipper Technical Analysis	
<code>http://views.rkd.reuters.com/views/lipper/[appID]/technicalanalysis.aspx?lipperid=40000700</code>	

The user gets the following Web View as a result:

Technical Analysis				
Name	1 Year	3 Years	5 Years	10 Years
Alpha	0.06	-0.12	-0.02	0.07
Beta	0.79	0.93	0.91	0.91
Correlation	0.97	0.97	0.96	0.92
Information Ratio	-0.24	-0.28	-0.09	0.09
Max Drawdown	-1.8	-15.66	-15.66	-15.66
Percentage Growth	7.3	8.2	18.42	63.03
R-Squared	0.93	0.95	0.93	0.84
Relative Performance	-0.99	-5.53	-2.75	9.71
Risk/Reward Ratio	0.68	0.12	0.19	0.3
Sharpe Ratio	0.66	0.09	0.07	0.16
Standard Deviation	3.04	6.79	5.41	4.9
Tracking Error	0.32	0.49	0.44	0.58
Treynor Ratio	0.73	0.19	0.12	0.26



47.4.13.14 Lipper TotalNetAsset History

This Web View can be used to retrieve a detailed list of the Total Net Asset (TNA) values for the specified period for the given asset(s).

TNA stands for Total Net Asset or the total funds under management, expressed in millions in currency of the fund.

The table provided below lists the parameters which can be used for the Lipper TotalNetAsset (TNA) History Web View:

Parameter	Description
BEGIN_DATE	The begin date of the specified period.
CURRENCY	The currency for the returned price. For full listing of available currency codes, see section Currency Code Enumeration in the Lipper Data Enumerations chapter.
END_DATE	The end date of the specified period.
ERROR	(Optional) TRUE / FALSE. If set to FALSE - the application will display only available/identifiable funds in the rendered view.



	If set to TRUE - the application will display available/identifiable funds and notify the user about invalid funds at the bottom of the rendered view.
LANGUAGE	The display language for the returned data. Possible values: languageneutral, chinesesimplified, chinesetaiwan, traditionalchinese, dutch, english, french, german, italian, japanese, korean, spanish, thai.
LATEST_ONLY	If set to true then only data for the most recently available date will be returned. If false then all available TNA data will be returned.
LIPPERIDS	A Lipper ID is a unique eight- or nine-digit number (e.g., 60003333) that identifies a collective investment.

To display Lipper TNA History Web View, the user can construct the following URL by using the table above:

`http://[views_server]/views/lipper/[appID]/tnahistory.aspx?begin_date=[value1]&currency=[value2]&end_date=[value3]&error=[value4]&language=[value5]&latest_only=[value6]&lipperids=[value7|value8|valueN]`

This example searches for the specified funds:

HTTP Sample Request - Lipper TNA History

`http://views.rkd.reuters.com/views/lipper/[appID]/tnahistory.aspx?lipperids=40000700|40000255|40007925`

The user gets the following Web View as a result:

Total Net Asset History (in millions)	
	[+] Expand All
American Funds Bond Fund of America;A	[-]
31 December 2010	25627.3 USD
30 November 2010	26808.9 USD
29 October 2010	27605.5 USD
30 September 2010	27872.4 USD
31 August 2010	28009.8 USD
30 July 2010	27718.8 USD
30 June 2010	27417.8 USD
28 May 2010	27183.4 USD
30 April 2010	27146.4 USD
31 March 2010	27231.1 USD
26 February 2010	27481.1 USD
29 January 2010	27514.6 USD
Neuberger Berman Mid Cap Growth Fund;Investor	[+]
Russell US Quantitative Equity Fund;I	[+]



47.4.13.15 Lipper Top10 Holdings

This Web View can be used to show the portfolio's top ten holdings with the greatest asset weighting (by %TNA).

The table provided below lists the parameters which can be used for the Lipper Top 10 Holdings Web View:



Parameter	Description
ERROR	(Optional) TRUE / FALSE. If set to FALSE - the application will display only available/identifiable funds in the rendered view. If set to TRUE - the application will display available/identifiable funds and notify the user about invalid funds at the bottom of the rendered view.
LANGUAGE	The display language for the returned data. Possible values: languagenatural, chinesesimplified, chinesetaiwan, traditionalchinese, dutch, english, french, german, italian, japanese, korean, spanish, thai.
LIPPERIDS	A Lipper ID is a unique eight- or nine-digit number (e.g., 60003333) that identifies a collective investment.

To display Lipper Lipper Top 10 Holdings Web View, the user can construct the following URL by using the table above:

`http:[views_server]/views/lipper/[appID]/top10holdings.aspx?&error=[value1]&language=[value2]&lipperids=[value3 | value4 | valueN]`

This example searches for the specified funds:

HTTP Sample Request - Lipper Top 10 Holdings
<code>http://views.rkd.reuters.com/views/lipper/[appID]/top10holdings.aspx?lipperids=40000700 40000255 40007925</code>

The user gets the following Web View as a result:

Top 10 Holdings	
[+] Expand All	
American Funds Bond Fund of America;A	[-]
US TREASURY 4.000% 15-FEB-2015	0.8%
US TREASURY 4.250% 15-AUG-2013	1.97%
UNITED STATES TREASURY NOTES 3.625% 15-AUG-2019	1.79%
US TREASURY 3.500% 15-FEB-2018	1.63%
FANNIE MAE TBA	2.7%
UNITED STATES TREASURY NOTES 2.625% 30-APR-2016	1.03%
US TREASURY 4.500% 15-FEB-2036	1.02%
UNITED STATES TREASURY BONDS 4.625% 15-FEB-2040	0.96%
UNITED STATES TREASURY NOTES 3.125% 15-MAY-2019	0.96%
UNITED STATES TREASURY NOTES 3.750% 15-NOV-2018	1.19%
Neuberger Berman Mid Cap Growth Fund;Investor	[+]
Russell US Quantitative Equity Fund;I	[+]



47.4.13.16 Lipper Classifications

This Web View can be used to retrieve classification types for the given asset(s) based on the classSchemeID.

A classification is a designation assigned to assets based on various characteristics of the assets. For example, "Equity North America" is a classification assigned to an asset. Classifications are organized into classification schemes. Lipper offers or tracks multiple classification schemes around the world. For example, Equity North America is a classification within the Lipper Global Classification scheme.



Lipper Fund Classifications

Lipper fund classifications provide the ability to make meaningful 'like for like' comparisons across funds with similar investment mandates. Choose from style based holdings classifications; proprietary fund association local market schemes; or take a much broader approach by using the Lipper Global Classification which encompasses all funds tracked by Lipper.

The table provided below lists the parameters which can be used for the Lipper Classifications Web View:

Parameter	Description
BLOCKSIZE	The size of blocks in which data is returned. Default value is 3.
EFFECTIVE_DATE	The effective date for the classifications data.
ERROR	(Optional) TRUE / FALSE. If set to FALSE - the application will display only available/identifiable funds in the rendered view. If set to TRUE - the application will display available/identifiable funds and notify the user about invalid funds at the bottom of the rendered view.
LANGUAGE	The display language for the returned data. Possible values: languageneutral, chinesesimplified, chinesetaiwan, traditionalchinese, dutch, english, french, german, italian, japanese, korean, spanish, thai.
LIPPERIDS	A Lipper ID is a unique eight- or nine-digit number (e.g., 60003333) that identifies a collective investment.

To display Lipper Classifications Web View, the user can construct the following URL by using the table above:

http:[views_server]/views/lipper/[appID]/classification.aspx?blocksize=[value1]&effective_date=[value2]&error=[value3]&language=[value4]&lipperids=[value5|value6|valueN]

This example searches for the specified funds:

HTTP Sample Request - Lipper Classifications
http://views.rkd.reuters.com/views/lipper/[appID]/classification.aspx?lipperids=40000700 40000255 40007925

The user gets the following Web View as a result:

Classifications
[+] Expand All American Funds Bond Fund of America;A [-] US Mutual Fund Classification US Mutual Fund Objective Lipper Global Neuberger Berman Mid Cap Growth Fund;Investor [+] Russell US Quantitative Equity Fund;I [+]



47.4.13.17 Lipper Performance Header

This Web View can be used to retrieve performance header for a specific fund.

The table provided below lists the parameters which can be used for the Lipper Performance Header Web View:

Parameter	Description



CURRENCY	The display currency for the returned data. For full listing of available currency codes, see section Currency Code Enumeration in the Lipper Data Enumerations chapter.
LANGUAGE	The display language for the returned data. Possible values: languageneutral, chinesesimplified, chinesetaiwan, traditionalchinese, dutch, english, french, german, italian, japanese, korean, spanish, thai.
LIPPERID	A Lipper ID is a unique eight- or nine-digit number (e.g., 60003333) that identifies a collective investment.

To display Lipper Performance Header Web View, the user can construct the following URL by using the table above:

`http://[views_server]/views/lipper/[appID]/performanceheader.aspx?currency=[value1]&language=[value2]&lipperid=[value3]`

This example searches for the specified funds:

HTTP Sample Request - Lipper Performance Header	
<code>http://views.rkd.reuters.com/views/lipper/[appID]/performanceheader.aspx?lipperid=40000700</code>	

The user gets the following Web View as a result:

American Funds Bond Fund of America;A NAV: 12.18 USD YTD: 0% 12 January 2011	
	

47.4.13.18 Lipper European Union Tax Directive

This Web View can be used to retrieve EU tax directive information for the given asset(s).

The EU Tax Directive applies only to bank interest, bond interest, and analogous income, such as income from bond funds, money-market funds, loans and mortgages.

The table provided below lists the parameters which can be used for the Lipper EU Tax Directive Web View:

Parameter	Description
ERROR	(Optional) TRUE / FALSE. If set to FALSE - the application will display only available/identifiable funds in the rendered view. If set to TRUE - the application will display available/identifiable funds and notify the user about invalid funds at the bottom of the rendered view.
LANGUAGE	The display language for the retrieved data. Possible values: languageneutral, chinesesimplified, chinesetaiwan, traditionalchinese, dutch, english, french, german, italian, japanese, korean, spanish, thai.
LIPPERIDS	A Lipper ID is a unique eight- or nine-digit number (e.g., 60003333) that identifies a collective investment.
UNIVERSE	The code that represents the Universe, for which the Lipper Leader Scores will be returned. For the list of available Universes, see the Universe Enumeration section in the Lipper Data Enumerations chapter.

To display Lipper European Union Tax Directive Web View, the user can construct the following URL by using the table above:

`http://[views_server]/views/lipper/[appID]/eutaxdirective.aspx?error=[value1]&language=[value2]&lipperids=[value3 | value4 | valueN] &universe=[value5]`

This example searches for the specified funds:

HTTP Sample Request - Lipper European Union Tax Directive	
<code>http://views.rkd.reuters.com/views/lipper/[appID]/eutaxdirective.aspx?lipperids=40000700 40000255 40007925</code>	



The user gets the following Web View as a result:

European Union Tax Directive

[+] Expand All			
American Funds Bond Fund of America;A		[-]	
Start Date	--	End Date	--
Directive Status	--	NavTIIA	No
Directive 15 Percent Threshold	No	Dividend TIIA	No
Directive 40 Percent Threshold	No	Swiss Funds Ex Bank Affidavit	No
KG Type Funds	No	Non-Grandfathered Holdings	0
Prospectus Vs Asset Allocation	No		
Neuberger Berman Mid Cap Growth Fund;Investor		[+]	
Russell US Quantitative Equity Fund;I		[+]	



47.4.13.19 Lipper Search

This Web View allows the client to look for an asset based on several types of characteristics. For example, Lipper Search gives the user the ability to search for assets with a name that 'begins with' or 'contains' certain words or phrases.

The table provided below lists the parameters which can be used for the Lipper Search Web View:

Parameter	Description
MAXREC	Defines the maximum number of results to be returned. Default is 65535.
PAGE	This parameter is used to navigate between pages. (Example: page=2).
PAGESIZE	Defines number of results to be displayed per page. Default is 10.
SEARCH_STRING	The classification scheme for which to search according to the specified search string value. Note that this field does not accept any special characters.
SEARCH_STYLE	Defines search options. Possible values are: beginswith and contains.
SHOWFORM	Defines whether to display the search form.
SID	(Optional)
UNIVERSE	The code of the Universe. For full listing of universe codes, see section Universe Enumeration in the Lipper Data Enumerations chapter.

To display Lipper Search Web View, the user can construct the following URL by using the table above:

```
http://[views_server]/views/lipper/[appID]/search.aspx?maxrec=[value1]&page=[value2]&pagesize=[value3]&search_string=[value4]&search_style=[value5]&showform=[value6]&sid=[value7]&universe=[value8]
```

This example searches for the specified funds:

HTTP Sample Request - Lipper Search
http://views.rkd.reuters.com/views/lipper/[appID]/search.aspx

The user gets the following Web View search form as a result:

☒ Begins With
 ☐ Contains

Find:

Universe Code:



47.4.13.20 Lipper Overview

This Web View allows the user to retrieve a wide range of basic Lipper fund data.

The table provided below lists the parameters which can be used for the Lipper Overview Web View:

Parameter	Description
BEGIN_DATE	The begin date of the specified period.
CURRENCY	The display currency for the returned data. For full listing of available currency codes, see section Currency Code Enumeration in the Lipper Data Enumerations chapter.
EFFECTIVE_DATE	The effective date for the retrieved overview data.
END_DATE	The end date of the specified period.
LANGUAGE	The display language for the retrieved data. Possible values: languageneutral, chinesesimplified, chinesetaiwan, traditionalchinese, dutch, english, french, german, italian, japanese, korean, spanish, thai.
LATEST_ONLY	If set to true then only data for the most recently available date will be returned. If false then all available data will be returned.
LEAD_SCORE_SIZE	Defines Lipper Score size. Possible values are: large, medium.
LIPPERID	A Lipper ID is a unique eight- or nine-digit number (e.g., 60003333) that identifies a collective investment.
UNIVERSE	The code that represents the Universe, for which the data will be returned. For the list of available Universes, see the Universe Enumeration section in the Lipper Data Enumerations chapter.

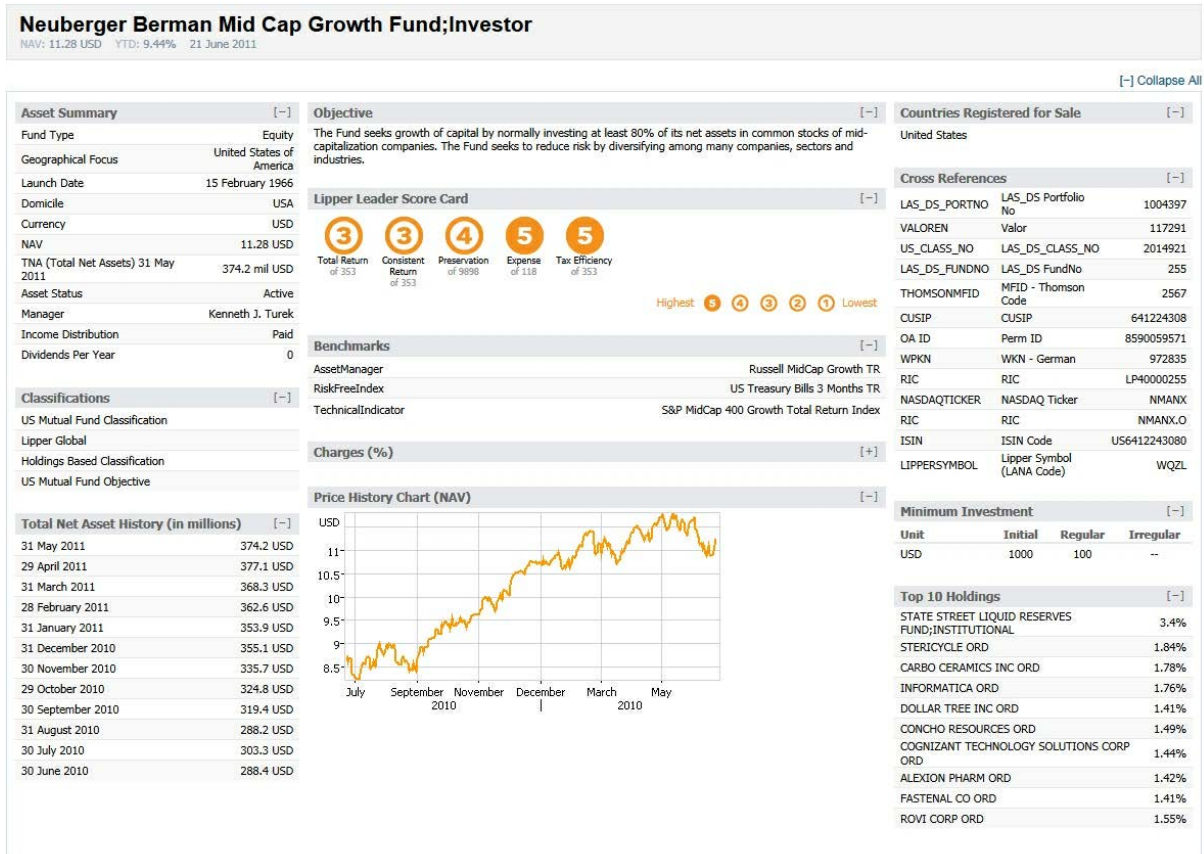
To display Lipper Overview Web View, the user can construct the following URL by using the table above:

```
http://[views_server]/views/lipper/[appID]/overview.aspx?begin_date=[value1]&currency=[value2]&effective_date=[value3]
&end_date=[value4]&language=[value5]&latest_only=[value6]
&lead_score_size=[value7]&lipperid=[value8]&universe=[value9]
```

This example searches for the specified funds:

HTTP Sample Request - Lipper Overview
http://views.rkd.reuters.com/views/lipper/[appID]/overview.aspx?lipperid=40000255

The user gets the following Web View as a result:



47.4.13.21 Lipper Top Performing Funds (All)

This Web View can be used to retrieve the given country's best or top-performing funds.

The table provided below lists the parameters which can be used for the Lipper Top Performing Funds (All) Web View:

Parameter	Description
COUNTRIES	The country for which the best performing funds should be returned. For full listing of available country codes, see section Countries Enumeration in the Lipper Data Enumerations chapter.
CURRENCY	The display currency for the returned list. For full listing of available currency codes, see section Currency Code Enumeration in the Lipper Data Enumerations chapter.
INCL_HEDGEFUNDS	If true, hedge funds will be included in the returned list of poorest performing funds; otherwise, hedge funds will not be included in the results. Hedge funds are investment funds open to a limited range of investors. A hedge fund allows more investment and trading activities than other investment funds and an investor pays a special performance fee to its investment manager.
LANGUAGE	The display language for the returned data. Possible values: languagenutral, chinesesimplified, chinesetaiwan, traditionalchinese, dutch, english, french, german, italian, japanese, korean, spanish, thai.
NUMBER_OF_ASSETS	The number of funds that should be included in the list of top performers. Default is 10.

To display Lipper Top Performing Funds (All) Web View, the user can construct the following URL by using the table above:

[http://\[views_server\]/views/lipper/\[appID\]/topperformingfund.aspx?countries=\[value1\]&currency=\[value2\]&incl_hedgefunds=\[value3\]](http://[views_server]/views/lipper/[appID]/topperformingfund.aspx?countries=[value1]&currency=[value2]&incl_hedgefunds=[value3])



&language=[value4]&number_of_assets=[value5]

This example searches for the specified funds:

HTTP Sample Request - Top Performing Funds (All)

[http://views.rkd.reuters.com/views/lipper/\[appID\]/topperformingfund.aspx?currency=USD&countries=USA|CAN|GBR&incl_hedgefunds=true](http://views.rkd.reuters.com/views/lipper/[appID]/topperformingfund.aspx?currency=USD&countries=USA|CAN|GBR&incl_hedgefunds=true)

The user gets the following Web View as a result:

Top Performers - ALL (USD)

Name	YTD
Sentry China Series F	0
Montrusco Bolton Quant Can Eq	0
Montrusco Bolton Global Equity	0
Montrusco Bolton Fixed Income	0
Montrusco Bolton Equity Income	0
Montrusco Bolton Canadian Eq +	0
Montrusco Bolton Balanced	0
Montrusco Bolton Can SC Eq	0
Montrusco Bolton Bond Tot Ret	0
Ark Ast Hill Mth Inc Cl Srs F	0



47.4.13.22 Lipper Bottom Performing Funds (All)

This Web View can be used to retrieve the given country's worst or bottom-performing funds..

The table provided below lists the parameters which can be used for the Lipper Bottom Performing Funds (All) Web View:

Parameter	Description
COUNTRIES	The country for which the poorest performing funds should be returned. For full listing of available country codes, see section Countries Enumeration in the Lipper Data Enumerations chapter.
CURRENCY	The display currency for the returned list. For full listing of available currency codes, see section Currency Code Enumeration in the Lipper Data Enumerations chapter.
INCL_HEDGEFUNDS	If true, hedge funds will be included in the returned list of poorest performing funds; otherwise, hedge funds will not be included in the results. Hedge funds are investment funds open to a limited range of investors. A hedge fund allows more investment and trading activities than other investment funds and an investor pays a special performance fee to its investment manager.
LANGUAGE	The display language for the returned data. Possible values: languagenutral, chinesesimplified, chinesetaiwan, traditionalchinese, dutch, english, french, german, italian, japanese, korean, spanish, thai.
NUMBER_OF_ASSETS	The number of funds that should be included in the list of poorest performers. Default is 10.

To display Lipper Bottom Performing Funds (All) Web View, the user can construct the following URL by using the table above:

`http://[views_server]/views/lipper/[appID]/bottomperformingfund.aspx?countries=[value1]&currency=[value2]&incl_hedgefunds=[value3]&language=[value4]&number_of_assets=[value5]`

This example searches for the specified funds:

HTTP Sample Request - Lipper Bottom Performing Funds (All)

`http://views.rkd.reuters.com/views/lipper/[appID]/bottomperformingfund.aspx?currency=USD&countries=USA|CAN|GBR&incl_hedgefunds=true`

The user gets the following Web View as a result:

Bottom Performers - ALL (USD)

Name	YTD
Sentry China Series F	0
Montrusco Bolton Quant Can Eq	0
Montrusco Bolton Global Equity	0
Montrusco Bolton Fixed Income	0
Montrusco Bolton Equity Income	0
Montrusco Bolton Canadian Eq +	0
Montrusco Bolton Balanced	0
Montrusco Bolton Can SC Eq	0
Montrusco Bolton Bond Tot Ret	0
Ark Ast Hill Mth Inc Cl Srs F	0



47.4.13.23 Lipper Top Performing Funds (by LGC)

This Web View can be used to retrieve the top or best-performing funds (based on year-to-date performance) for one or more Lipper Global Classification Schemas.

Lipper Fund Classifications

Lipper fund classifications provide the ability to make meaningful 'like for like' comparisons across funds with similar investment mandates. Choose from style based holdings classifications; proprietary fund association local market schemes; or take a much broader approach by using the Lipper Global Classification which encompasses all funds tracked by Lipper.

The table provided below lists the parameters which can be used for the Lipper Top Performing Funds (by LGC) Web View:

Parameter	Description
CURRENCY	The display currency for the returned list. For full listing of available currency codes, see section Currency Code Enumeration in the Lipper Data Enumerations chapter.
LANGUAGE	The display language for the returned data. Possible values: languagenutral, chinesesimplified, chinesetaiwan, traditionalchinese, dutch, english, french, german, italian, japanese, korean, spanish, thai.
NUMBER_OF_ASSETS	The number of funds that should be included in the list of poorest performers. Default is 10.
SCHEMAS	The Lipper Global Classification schema for which top-performing funds should be returned. Available Lipper Global Classification schemes are listed in the LG Classification Scheme Enumeration section in the Lipper Data Enumerations chapter.

To display Lipper Top Performing Funds (by LGC) Web View, the user can construct the following URL by using the table above:

`http://[views_server]/views/lipper/[appID]/topperforminglgcfunds.aspx?currency=[value1]&language=[value2]&number_of_assets=[value3]&schemas=[value4]`

This example searches for the specified funds:

HTTP Sample Request - Lipper Top Performing Funds (by LGC)

`http://views.rkd.reuters.com/views/lipper/[appID]/topperforminglgcfunds.aspx?number_of_assets=15&schemas=LipperGlobalHedge|LipperGlobalBonds`

The user gets the following Web View as a result:

Top Performers - LGC (YTD - USD)

No data is available



47.4.13.24 Lipper Bottom Performing Funds (by LGC)

This Web View can be used to retrieve the bottom or worst-performing funds (based on year-to-date performance) for one or more Lipper Global Classification Schemas.

Lipper Fund Classifications

Lipper fund classifications provide the ability to make meaningful 'like for like' comparisons across funds with similar investment mandates. Choose from style based holdings classifications; proprietary fund association local market schemes; or take a much broader approach by using the Lipper Global Classification which encompasses all funds tracked by Lipper.

The table provided below lists the parameters which can be used for the Lipper Bottom Performing Funds (by LGC) Web View:

Parameter	Description
CURRENCY	The display currency for the returned list. For full listing of available currency codes, see section Currency Code Enumeration in the Lipper Data Enumerations chapter.
LANGUAGE	The display language for the returned data. Possible values: languageneutral, chinesesimplified, chinesetaiwan, traditionalchinese, dutch, english, french, german, italian, japanese, korean, spanish, thai.
NUMBER_OF_ASSETS	The number of funds that should be included in the list of poorest performers. Default is 10.
SCHEMAS	The Lipper Global Classification schema for which bottom-performing funds should be returned. Available Lipper Global Classification schemes are listed in the LG Classification Scheme Enumeration section in the Lipper Data Enumerations chapter.

To display Lipper Bottom Performing Funds (by LGC) Web View, the user can construct the following URL by using the table above:

`http://[views_server]/views/lipper/[appID]/bottomperforminglgcfunds.aspx?currency=[value1]&language=[value2]&number_of_assets=[value3]&schemas=[value4]`

This example searches for the specified funds:

HTTP Sample Request - Lipper Bottom Performing Funds (by LGC)

`http://views.rkd.reuters.com/views/lipper/[appID]/bottomperforminglgcfunds.aspx?number_of_assets=15&schemas=LipperGlobalHedge|LipperGlobalBonds`

The user gets the following Web View as a result:

Bottom Performers - LGC (YTD - USD)

No data is available



47.4.13.25 Lipper Comparative Performance

This Web View can be used to calculate and return comparative performance (by %) for the specified funds.

The table provided below lists the parameters which can be used for the Lipper Comparative Performance Web View:

Parameter	Description
CURRENCY	The currency for the returned comparison information. For full listing of available currency codes, see section Currency Code Enumeration in the Lipper Data Enumerations chapter.
ERROR	(Optional) TRUE / FALSE. If set to FALSE - the application will display only available/identifiable funds in the rendered view. If set to TRUE - the application will display available/identifiable funds and notify the user about invalid funds at the bottom of the rendered view.
LANGUAGE	The display language for the returned data. Possible values: languageneutral, chinesesimplified, chinesetaiwan, traditionalchinese, dutch, english, french, german, italian, japanese, korean, spanish, thai.
LIPPERIDS	A Lipper ID is a unique eight- or nine-digit number (e.g., 60003333) that identifies a collective investment.

To display Lipper Comparative Performance Web View, the user can construct the following URL by using the table above:

`http:[views_server]/views/lipper/[appID]/comparativeperformance.aspx?currency=[value1]&error=[value2]&language=[value3]&lipperids=[value4|valueN]`

This example searches for the specified funds:

HTTP Sample Request - Lipper Comparative Performance
<code>http://views.rkd.reuters.com/views/lipper/[appID]/comparativeperformance.aspx?lipperids=40000700 40000255 40007925&cy=USD</code>

The user gets the following Web View as a result:

Cumulative Performance by %

[+] Expand All

American Funds Bond Fund of America;A								
[-]								
Name	1 Month	3 Months	6 Months	1 Year	3 Years	5 Years	10 Years	SI (Since Inception)
BofA Merrill Lynch U.S. Corporate Master TR	-1.4	-2.03	2.76	9.02	21.67	32.9	88.69	1955.09
Bardays Capital U.S. Aggregate Bond TR	-1.08	-1.3	1.15	6.54	18.77	32.55	76.33	1541.1
US Treasury Bills 3 Months TR	0.01	0.03	0.07	0.14	1.69	11.12	23.35	1364.16
Lipper Global Bond USD Corporates	-1.26	-1.61	2.74	8.29	13.72	21.17	53.33	215.4
American Funds Bond Fund of America;A	-0.94	-1.35	1.95	7.3	8.2	18.42	63.03	1834.09
Neuberger Berman Mid Cap Growth Fund;Investor								
[+]								
Russell US Quantitative Equity Fund;I								
[+]								



47.4.13.26 Lipper Newly Available Funds

This Web View can be used to display the list of funds recently added to Lipper database.

The table provided below lists the parameters which can be used for the Lipper Newly Available Funds Web View:

Parameter	Description
COUNTRY	The country for which the newly available funds should be returned. For full listing of available country codes, see section Countries Enumeration in the Lipper Data Enumerations chapter.
INCEPTION_DATE	The inception date to be used in the search.
LANGUAGE	The display language for the retrieved data. Possible values: languagenetural, chinesesimplified, chinesetaiwan, traditionalchinese, dutch, english, french, german, italian, japanese, korean, spanish, thai.
PAGE	This parameter is used to navigate between pages. (Example: page=2).
PAGESIZE	Defines the number of results to be displayed per page. Default is 10.
SID	(Optional) Cache key used for paging.
USE_HYPERLINK	Defines whether to include a hyperlink for a fund name.

To display Lipper Newly Available Funds Web View, the user can construct the following URL by using the table above:

`http://[views_server]/views/lipper/[appID]/newlyavailablefunds.aspx?country=[value1]&inceptiondate=[value2]&language=[value3]&page=[value4]&pagesize=[value5]&sid=[value6]&use_hymlink=[value7]`

This example searches for the specified funds:

HTTP Sample Request - Lipper Newly Available Funds
<code>http://views.rkd.reuters.com/views/lipper/[appID]/newlyavailablefunds.aspx</code>



The user gets the following Web View as a result:

16 Newly Available Funds

Morgan Stanley Inst Asian Equity Port;H
Morgan Stanley Inst Asian Equity Port;I
Morgan Stanley Inst Asian Equity Port;L
Morgan Stanley Inst Asian Equity Port;P
Morgan Stanley Inst International Advtg Port;H
Morgan Stanley Inst International Advtg Port;I
Morgan Stanley Inst International Advtg Port;L
Morgan Stanley Inst International Advtg Port;P
Morgan Stanley Institutional Global Advtg Port;H
Morgan Stanley Institutional Global Advtg Port;I

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47.4.13.27 Lipper Calendar Year Performance

This Web View can be used to retrieve calendar year performance calculation for the specified assets.

The table provided below lists the parameters which can be used for the Lipper Calendar Year Performance Web View:

Parameter	Description
CURRENCY	The currency for the returned comparison information. For full listing of available currency codes, see section Currency Code Enumeration in the Lipper Data Enumerations chapter.
ERROR	(Optional) TRUE / FALSE. If set to FALSE - the application will display only available/identifiable funds in the rendered view. If set to TRUE - the application will display available/identifiable funds and notify the user about invalid funds at the bottom of the rendered view.
LANGUAGE	The display language for the returned data. Possible values: languagenutral, chinesesimplified, chinesetaiwan, traditionalchinese, dutch, english, french, german, italian, japanese, korean, spanish, thai.
LIPPERIDS	A Lipper ID is a unique eight- or nine-digit number (e.g., 60003333) that identifies a collective investment.

To display Lipper Calendar Year Performance Web View, the user can construct the following URL by using the table above:

http:[views_server]/views/lipper/[appID]/calendaryearperformance.aspx?currency=[value1]&error=[value2]&language=[value3]&lipperids=[value4|valueN]

This example searches for the specified funds:

HTTP Sample Request - Lipper Calendar Year Performance
http://views.rkd.reuters.com/views/lipper/[appID]/calendaryearperformance.aspx?lipperids=40000700 40000255 40007925&currency=USD

The user gets the following Web View as a result:

Calendar Year Performance by %

[+] Expand All

American Funds Bond Fund of America;A							[-]	
Name	2006	2007	2008	2009	2010	YTD		
American Funds Bond Fund of America;A	5.88	3.37	-12.24	14.91	7.3	3.22		
Barclays Capital U.S. Aggregate Bond TR	4.33	6.97	5.24	5.93	6.54	3.02		
Lipper Global Bond USD Corporates	3.36	3.08	-9.32	15.82	9.11	3.82		
US Treasury Bills 3 Months TR	4.67	4.4	1.4	0.15	0.14	0.04		
BofA Merrill Lynch U.S. Corporate Master TR	4.39	4.64	-6.82	19.76	9.52	4.16		
Neuberger Berman Mid Cap Growth Fund;Investor							[+]	
Russell US Quantitative Equity Fund;I							[+]	



47.4.13.28 Lipper Asset Style Matrix

This Web View can be used to retrieve Lipper asset style matrix for the specified asset.

Asset Matrix Style is a graphical depiction of the funds according to the U.S. Diversified Equity (USDE) classification. It only applies to the funds with one of the twelve USDE classifications.

The table provided below lists the parameters which can be used for the Lipper Asset Style Matrix Web View:

Parameter	Description
LANGUAGE	The display language for the returned data. Possible values: languageneutral, chinesesimplified, chinesetaiwan, traditionalchinese, dutch, english, french, german, italian, japanese, korean, spanish, thai.
LIPPERID	A Lipper ID is a unique eight- or nine-digit number (e.g., 60003333) that identifies a collective investment.
MATRIX_SIZE	Type of matrix to display - small (125x125px) or large (175x175px).

This example displays Lipper Asset Style Matrix for searches for the fund with 40000255 LipperID:

HTTP Sample Request - Lipper Asset Style Matrix (Single)	
http://views.rkd.reuters.com/views/lipper/[appID]/assetstylematrix.aspx?lipperid=40000255	

The user gets the following Web View as a result:





47.4.13.29 Lipper Asset Style Matrixes

This Web View can be used to display a table of funds with an inline matrix icon to display the style matrix for each fund.

Asset Matrix Style is a graphical depiction of the funds according to the U.S. Diversified Equity (USDE) classification. It only applies to the funds with one of the twelve USDE classifications.

The table provided below lists the parameters which can be used for the Lipper Asset Style Matrixes Web View:

Parameter	Description
ERROR	(Optional) TRUE / FALSE. If set to FALSE - the application will display only available/identifiable funds in the rendered view. If set to TRUE - the application will display available/identifiable funds and notify the user about invalid funds at the bottom of the rendered view.
LANGUAGE	The display language for the returned data. Possible values: languageneutral, chinesesimplified, chinesetaiwan, traditionalchinese, dutch, english, french, german, italian, japanese, korean, spanish, thai.
LIPPERIDS	A Lipper ID is a unique eight- or nine-digit number (e.g., 60003333) that identifies a collective investment.
MATRIX_SIZE	Type of matrix to display - small (125x125px) or large (175x175px).

This example displays style matrixes for the specified funds:

HTTP Sample Request - Lipper Asset Style Matrixes (Multiple)
http://views.rkd.reuters.com/views/lipper/[appID]/assetstylematrixes.aspx?lipperids=40000700%7c40000255%7c40007925

The user gets the following Web View as a result:

Style Matrix

Lipper ID	Fund Name	Style Matrix
40000700	American Funds Bond Fund of America;A	
40000255	Neuberger Berman Mid Cap Growth Fund;Investor	
40007925	Russell US Quantitative Equity Fund;I	



47.4.14 Street Events

The Street Events Web Views allows users to search for events, retrieve details for specific events and events related to specific companies.

The user can use the following Street Events Web Views:

- **Calendar Event List** - displays daily/weekly/monthly calendar of events for a specific symbol.
- **Event Details** - gets details for a specific event.
- **Events** - searches for economic events for one or more specified market country code.
- **Upcoming Events** - shows a list of upcoming events related to the requested symbol.

47.4.14.1 Upcoming Events

This Web View can be used to display a list of upcoming events related to the requested symbol.

The table provided below lists the parameters which can be used for the Upcoming Events Web View:

Parameter	Description
EVENTTYPE	Enumeration of the types of events which must be included in results. Possible values are: brokerageanalystcalls, brokerageanalystmeetings, generalandpoliticaevents, companyvisits, conferencepresentations, conferences, corporateanalystmeetings, corporatecallsandpresentations, earningscallsandpresentations, earningsreleases, economicevents, exdividends, guidancecallsandpresentations, ipofilings, ipolockupexpirations, ipopricings, ipowithdrawals, mergerandacquisition, mergerandacquisitioncallsandpresentations, otherbrokerages, othercorporate, salesandtradingstatementcallsandpresentations, salesandtradingstatementreleases, secondaryfilings, secondarypricings, secondarywithdrawals, shareholderandannualmeetings, stocksplits, syndicatoroadshows, marketholidays.
MAXHEADLINES	Defines the maximum number of headlines to be retrieved by the search.
PAGESIZE	Sets the number of records to be displayed per page.
SYMBOL	Defines symbol that should be searched for.
SYMBOLTYPE	Defines symbol type. Possible values: cik, cusip, cusip6, exchangeticker, ibes, isin, ilxid, ric, sedol, tkocompanyid, tkquoteid, tkosecurityid.

To display Small upcoming events for Microsoft , the user submits the following request:

HTTP Sample Request - Upcoming Events for Microsoft
<pre>http://views.rkd.reuters.com/views/streetevents/[appID]/upcomingevents.aspx?symboltype=RIC&symbol=MSFT.O&pagesize=10&maxheadlines=3calendar.aspx?symboltype=RIC&outputsymboltype=RIC&symbols=MSFT.O GOOG.O IBM.N&fromdate=2011-06-01T12:00:00&period=Week&tooltip=true</pre>

The user gets the following Web View as a result:



Upcoming Events

Microsoft Corp

JUN 1 2011	Microsoft Corp at Bank of America Merrill Lynch Technology Conference Conference Presentations 18:35:00
JUN 2 2011	Microsoft Corp at Cowen and Company Technology Media & Telecom Conference Conference Presentations 17:35:00
JUL 18 2011	Q4 2011 Microsoft Corp Earnings Release Earnings Releases 16:00:00



THOMSON REUTERS

47.4.14.2 Events

This Web View can be used to search for economic events based on when they occur, and/or inclusion of that company in specific set of country codes.

The table provided below lists the parameters which can be used for Events Web View:

Parameter	Description
DATERANGE	Possible values: today, thisweek, nextweek, thismonth, custom.
EVENTTYPE	Enumeration of the types of events which must be included in results. Possible values are: brokerageanalystcalls, brokerageanalystmeetings, generalandpoliticevents, companyvisits, conferencepresentations, conferences, corporateanalystmeetings, corporatecallsandpresentations, earningscallsandpresentations, earningsreleases, economicevents, exdividends, guidancecallsandpresentations, ipofilings, ipolockupexpirations, ipopricings, ipowithdrawals, mergerandacquisition, mergerandacquisitioncallsandpresentations, otherbrokerages, othercorporate, salesandtradingstatementcallsandpresentations, salesandtradingstatementreleases, secondaryfilings, secondarypricings, secondarywithdrawals, shareholderandannualmeetings, stocksplits, syndicatoroadshows, marketholidays.
EXPORT	Defines whether to show the Export button.
FROMDATE	The date/time range starting from which events must be included in the search results. The From date must precede the To date.
INDUSTRIES	Specifies industry codes.
MARKETCOUNTRYCODE	Country code (ISO 3166 format).
MAXHEADLINES	Defines the maximum number of headlines to be retrieved by the search.
OUTPUTSYMBOLTYPE	Specifies company identifier (RIC or Exchange Ticker).



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PAGE	Defines what page number to display.
PAGESIZE	Sets the number of records to be displayed per page.
SHOWFORM	Defines whether to show results screen in the frame or not.
SID	(Optional) Cache key used for paging.
SORTBY	The value by which the results must be sorted. Possible values: none, date, symbol, companyname, eventname, eventtype.
SORTORDER	The order by which results must sorted - a (ascending) or d (descending).
SYMBOLS	Defines symbols that should be searched for.
SYMBOLTYPE	Defines symbol type. Possible values: cik, cusip, cusip6, exchangeticker, ibes, isin, ilxid, ric, sedol, tkocompanyid, tkoteid, tkosecurityid.
TITLE	Displays the specified title.
TODATE	The end date till which events must be returned.
TOOLTIP	Defines whether to display tooltips.
WATCHLIST	Shows watchlist name.

To display event list of the French and German auto industries for the last year, the user should send the following request:

HTTP Sample Request - Event List for French and German Auto Industries for the Last Year

```
http://views.rkd.reuters.com/views/streetevents/[appID]/events.aspx?
outputsymboltype=RIC&maxheadlines=100&industries=251020&daterange=Custom&marketcountrycode=DE|FR&fromdate=2010-06-
01T12:00:00&todate=2011-06-01T12:00:00&tooltip=true
```

The user gets the following Web View as a result:



Symbol Type/ Watchlist: Date Range:

Symbols: [Remove](#) [Add Field](#) From: [To: 06/01/2011 12:00 PM](#) [Basic Search](#)

Countries: [Remove](#) Industries: [Remove](#)
 [Remove](#) [Add Field](#)

Event Types: ☒ All Event Types

- ☒ Conference Presentations
- ☒ Conferences
- ☒ Corporate Analyst Meetings
- ☒ Corporate Calls And Presentations

[Search](#)

< Jun 01, 2010 > Results 1-10 of 258

Add	Event	RIC	Company Name	Headline	Date/Time
		PEUP.PA	Peugeot SA	Peugeot SA Annual General Meeting	31 May 2011 04:00:00
		H9WG.DE	HWA AG	Dividend For H9W.DE	24 May 2011 08:00:00
		H9WG.DE	HWA AG	Dividend For H9W.F	24 May 2011 08:00:00

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47.4.14.3 Event Details

This Street Events Details Web View can be used to view details per a single valid event.

The table provided below lists the parameters which can be used for this Web View:

Parameter	Description
EVENTID	ID of a valid event. Can be retrieved from the Events Web View.
OUTPUTSYMBOL TYPE	Company identifier (RIC or Exchange Ticker).

To display details per a single event, the user must submit the following request:

HTTP Sample Request - Event Details

```
http://views.rkd.reuters.com/views/streetevents/[appID]/details.aspx?eventid=3327707
```

The user gets the following Web View as a result:

Q3 2010 AER LINGUS GROUP PLC Earnings Release

Details		
Event Type	Earnings Releases	\$
Date/Time	05 November 2010 03:00:00	
RSVP Required	False	
Last Update	28 October 2010 06:34:44	
Live Webcast	None	
	05 November 2010 03:00:00 - 05 November 2010 03:00:00	
Replay Webcast	None	
	05 November 2010 05:00:00 - 01 January 0001 00:00:00	



47.4.14.4 Calendar Event List

This Web View can be used to display daily/weekly/monthly calendar of events for one or more symbols, watchlist, industry and/or country (market region).

The table provided below lists the parameters which can be used in the Street Events Calendar List Web View:

Parameter	Description
FROMDATE	The date/time range starting from which events must be included in the search results.
INCLUDEWEEKENDS	Defines whether to include weekends into the specified time range.
INDUSTRIES	Specifies industry codes.
MARKETCOUNTRYCODE	Defines country code (ISO 3166 format).
MAXHEADLINES	Defines the maximum number of headlines to be retrieved by the search.
OUTPUTSYMBOLTYPE	Specifies company identifier (RIC or Exchange Ticker).
PAGE	Defines what page number to display.
PAGESIZE	Sets the number of records to be displayed per page.
PERIOD	The Month or the quarter of the year the event belongs to. Possible values: day, week, month.
SHOWFORM	Defines whether to show results screen in the frame or not.
SID	(Optional) Cache key used for paging.
SORTBY	The value by which the results must be sorted. Possible values: none, date, symbol, companyname, eventname, eventtype.
SORTORDER	The order by which results must sorted - a (ascending) or d (descending).
SYMBOLS	Defines symbols that should be searched for.
SYMBOLTYPE	Defines symbol type. Possible values: cik, cusip, cusip6, exchangeticker, ibes, isin, ilxid, ric, sedol, tkocompanyid, tkquoteid, tkosecurityid.
TITLE	Displays the specified title.
TOOLTIP	Defines whether to display tooltips.
WATCHLIST	Shows watchlist name.

1. To display Calendar Weekly View for multiple companies, the user submits the following request:

HTTP Sample Request - Weekly View for Multiple Companies
http://views.rkd.reuters.com/views/streetevents/[appID]/calendar.aspx?symboltype=RIC&outputsymboltype=RIC&symbols=MSFT.O GOOG.O IBM.N&fromdate=2011-06-01T12:00:00&period=Week&tooltip=true

The user gets the following Web View as a result:

Symbol Type/
Watchlist:

RIC

Start Date:

06/01/2011 12:00 PM

Symbols:

MSFT.O

GOOG.O

IBM.N

Add Field

Remove

Remove

Remove

Search

Advanced Search

Day
Week
Month

May 29, 2011 - Jun 04, 2011

Total Events: 4
☐ Include Weekends

Monday	Tuesday	Wednesday	Thursday	Friday
30	31	1 MSFT.O IBM.N	2 GOOG.O MSFT.O	3



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2. To display Day View for a single country, the user can send the following request:

HTTP Sample Request - Day View for Great Britain

```
http://views.rkd.reuters.com/views/streetevents/[appID]/calendar.aspx?
outputsymboltype=ExchangeTicker&maxheadlines=100&marketcountrycode=GB&fromdate=2011-06-01T12:00:00&period=Day&tooltip=true
```

The user gets the following Web View as a result:



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Symbol Type/ Watchlist: Start Date:

Symbols: [Remove](#) [Add Field](#)

[Basic Search](#)

Countries: [Remove](#) [Add Field](#) Industries: [Add Field](#)

Event Types: ☒ All Event Types

- ☒ Conference Presentations
- ☒ Conferences
- ☒ Corporate Analyst Meetings
- ☒ Corporate Calls And Presentations

[Search](#)

Day Week Month

< Jun 01, 2011 > Results 1-10 of 825

Hour	Event	Ticker	Company Name	Headline
19:00:00			Metal-Pages	Metal-Pages' Metals for Energy & the Environment Conference
12:00:00		CSCG.L	Capital Shopping Centres Group PLC	Dividend For CSCG.J
12:00:00		CSCG.L	Capital Shopping Centres Group PLC	Dividend For CSO.J

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3. To display Monthly View for multiple industries, the user can use the following request:

HTTP Sample Request - Monthly View for Multiple Industries

```
http://views.rkd.reuters.com/views/streetevents/[appID]/calendar.aspx?
outputsymboltype=ExchangeTicker&maxheadlines=100&industries=203020|20305010&fromdate=2011-07-
01T12:00:00&period=Month&tooltip=true
```

The user gets the following Web View as a result:

Symbol Type/
Watchlist:

RIC

Start Date:

07/01/2011 12:00 PM

Symbols:

Add Field

Remove

Advanced Search

Search

Day
Week
Month

<
Jul 2011
>

Total Events: 34
☐ Include Weekends

Monday	Tuesday	Wednesday	Thursday	Friday
27	28 \$ AIRARABIA.DU	29	30	1
4	5	6 AB1.DE WJA.TO \$ TAIR.TU EZJ.L	7 AF.PA SAS.ST NAS.OL FIA1S.HE	8
11 LHA.DE \$ 020560.KS	12 \$ JAZEERA.KW	13 VLG.MC	14 \$ NAS.OL	15
18 \$ ALGT \$ AMR \$ ALK \$ UAL \$ DAL \$ JETAIRWAYS.NSE	19	20	21 \$ JBLU \$ VLG.MC \$ C6L.SI	22 C6L.SI
25 \$ LCC \$ RY4B.I \$ 500285.BO \$ 9204.T \$ 9202.T	26	27 \$ LAN.SN \$ EZJ.L \$ AF.PA	28 \$ GOLL4.SA \$ LHA.DE	29
1	2	3	4	5



47.4.15 Snapshot Views

The Snapshot Web Views allow users to search for a company description, address, contact details, officer names and a limited number of financial ratios and estimates.

The user can use the following Snapshot Web Views:

- **General Information** - provides general information pertaining to the primary issue and the most recent set of financials.

- **Contact Information** - provides contact information for the company, including an address, a contact person with title, and phone/fax number(s).
- **Web Links** - lists various commonly used web page addresses for the company, including home page, 'news releases' page, 'profile' page, the investor relations page etc.
- **Business Description** - provides a short business description for the specified company.
- **Financial Description** - provides financial summary for the specified company.
- **Officers and Directors** - provides information on company executives, including name, age, title(s).
- **Issues** - provides basic information on the issues.
- **Industry Sectors** - provides information on what industries, sectors and indices the company is a component of.
- **Consensus Recommendations** - provides forecasted consensus recommendations.
- **Consensus Recommendations 2** - provides an alternative view of consensus recommendations.
- **Price and Volume Summary** - provides current price and volume summary.
- **Income Statement** - provides income statement details.
- **Per Share Summary** - provides per share summary.
- **Ratios Summary** - provides the pre-calculated ratios summary.
- **Forecast Summary** - provides forecast information.

47.4.15.1 General Information

This Web View can be used to display general information pertaining to the primary issue and the most recent set of financials.

The table provided below lists the parameters which can be used in the General Information Web View:

Parameter	Description
COMPANY	Parameter used for symbol resolution. It means you can specify 3rd-Party symbols and the application will resolve them to RICs.
SHOWTITLE	Defines whether to show title on the Web View.
SYMBOL	Defines symbol for which general information will be retrieved.
SYMBOLTYPE	Defines symbol type. Default is RIC.

To display general information for IBM, the user submits the following request:

HTTP Sample Request - IBM General Information
http://views.rkd.reuters.com/views/snapshot/[appID]/basicinfo.aspx?symbol=IBM.N

The user gets the following Web View as a result:



International Business Machines Corp.

General Information	
Type:	Equity Issue
Reporting Currency:	U.S. Dollars
Latest Available Annual:	31 December 2010
Latest Available Interim:	31 March 2011
Employees:	426751
Shares Out:	1211200199
Total Float:	1210221956
Common Shareholders:	523553
Last Modified:	29 April 2011
Company Status:	Active
Most Recent Exchange:	1



47.4.15.2 Contact Information

This Web View can be used to display contact information for the specified company.

The table provided below lists the parameters which can be used in the Company Information Web View:

Parameter	Description
COMPANY	Parameter used for symbol resolution. It means you can specify 3rd-Party symbols and the application will resolve them to RICs.
SHOWTITLE	Defines whether to show title on the Web View.
SYMBOL	Defines symbol for which general information will be retrieved.
SYMBOLTYPE	Defines symbol type. Default is RIC.

To display contact information for IBM, the user submits the following request:

HTTP Sample Request - IBM Contact Information
http://views.rkd.reuters.com/views/snapshot/[appID]/contacts.aspx?symbol=IBM.N

The user gets the following Web View as a result:

International Business Machines Corp.

Contact Information	
Street Address:	One New Orchard Road
Street 2:	
City:	Armonk
State/Region:	NY
Postal Code:	10504
Country:	United States (USA)
Main Phone:	1 (914) 4991900
Main Fax:	1 (914) 7656021
Contact Phone:	
Contact:	Investor Relations.
Company Contact/Email:	ibm@computershare.com



47.4.15.3 Web Links

This Web View can be used to display most used web pages for the specified RIC.

The table provided below lists the parameters which can be used in the Web Links Web View:

Parameter	Description
COMPANY	Parameter used for symbol resolution. It means you can specify 3rd-Party symbols and the application will resolve them to RICs.
SHOWTITLE	Defines whether to show title on the Web View.
SYMBOL	Defines symbol for which general information will be retrieved.
SYMBOLTYPE	Defines symbol type. Default is RIC.

To display web links for IBM, the user submits the following request:

HTTP Sample Request - Web Links for IBM
http://views.rkd.reuters.com/views/snapshot/[appID]/weblinks.aspx?symbol=IBM.N

The user gets the following Web View as a result:

International Business Machines Corp.

Web Links

- [Home Page](#)
- [News Releases](#)
- [Investor Relations](#)
- [Financial Information](#)
- [Corporate History/Profile](#)
- [Executives](#)
- [Products/Services](#)
- [Employment Opportunities](#)



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47.4.15.4 Business Description

This Web View can be used to display business description for the specified company.

The table provided below lists the parameters which can be used in the Business Description Web View:

Parameter	Description
COMPANY	Parameter used for symbol resolution. It means you can specify 3rd-Party symbols and the application will resolve them to RICs.
SHOWTITLE	Defines whether to show title on the Web View.
SYMBOL	Defines symbol for which general information will be retrieved.
SYMBOLTYPE	Defines symbol type. Default is RIC.

To display business description for IBM, the user submits the following request:

HTTP Sample Request - IBM Business Description
http://views.rkd.reuters.com/views/snapshot/[appID]/busdesc.aspx?symbol=IBM.N

The user gets the following Web View as a result:

International Business Machines Corp.

Business Description

International Business Machines Corporation (IBM) is an information technology (IT) company. It operates under five segments: Global Technology Services (GTS), Global Business Services (GBS), Software, Systems and Technology, and Global Financing. GTS primarily provides IT infrastructure services and business process services. GBS primarily provides professional services and application management services. IBM's Software segment consists primarily of middleware and operating systems software. IBM provides clients with business solutions requiring advanced computing power and storage ... [more](#)



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47.4.15.5 Financial Description

This Web View can be used to display financial summary for the specified company.

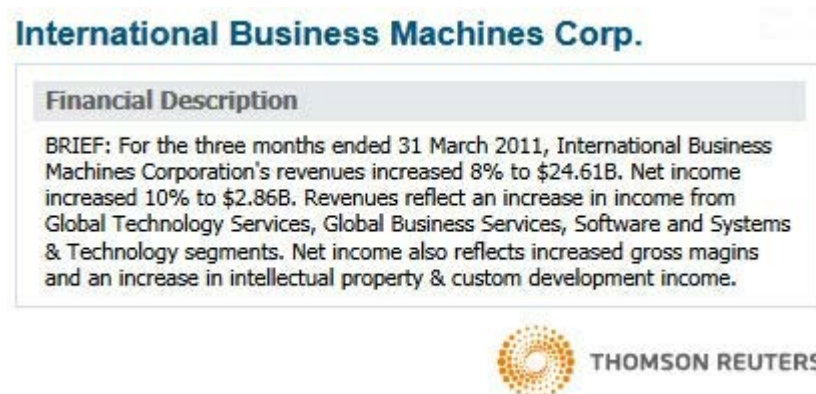
The table provided below lists the parameters which can be used in the Financial Description Web View:

Parameter	Description
COMPANY	Parameter used for symbol resolution. It means you can specify 3rd-Party symbols and the application will resolve them to RICs.
SHOWTITLE	Defines whether to show title on the Web View.
SYMBOL	Defines symbol for which general information will be retrieved.
SYMBOLTYPE	Defines symbol type. Default is RIC.

To display financial summary for IBM, the user submits the following request:

HTTP Sample Request - IBM Financial Description
http://views.rkd.reuters.com/views/snapshot/[appID]/finsummary.aspx?symbol=IBM.N

The user gets the following Web View as a result:



International Business Machines Corp.

Financial Description

BRIEF: For the three months ended 31 March 2011, International Business Machines Corporation's revenues increased 8% to \$24.61B. Net income increased 10% to \$2.86B. Revenues reflect an increase in income from Global Technology Services, Global Business Services, Software and Systems & Technology segments. Net income also reflects increased gross margins and an increase in intellectual property & custom development income.

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47.4.15.6 Officers and Directors

This Web View can be used to display information on company executives, including name, age, title(s).

The table provided below lists the parameters which can be used in the Officers and Directors Web View:

Parameter	Description
COMPANY	Parameter used for symbol resolution. It means you can specify 3rd-Party symbols and the application will resolve them to RICs.
SHOWTITLE	Defines whether to show title on the Web View.
SYMBOL	Defines symbol for which general information will be retrieved.
SYMBOLTYPE	Defines symbol type. Default is RIC.

To display officers and directors for IBM, the user submits the following request:

HTTP Sample Request - IBM Officers Information
http://views.rkd.reuters.com/views/snapshot/[appID]/officers.aspx?symbol=IBM.N

The user gets the following Web View as a result:

International Business Machines Corp.

Officers & Directors					
Rank	Officer	Title	Age	Start	Since
1	Samuel J. Palmisano	Chairman of the Board, President, Chief Executive Officer (//Chmn./CEO)	59	01/01/2003	1997
2	Robert C. Weber	Senior Vice President - Legal and Regulatory Affairs, General Counsel (//Sr. VP/Counsel)	60	//2006	2006
3	Jon C. Iwata	Senior Vice President - Marketing and Communications (//Sr. VP/Dir.-Mktg.)	48	07/01/2008	01/01/2002
4	J. Randall MacDonald	Senior Vice President - Human Resources (//Sr. VP/Dir.-HR)	62	08//2000	08/2000
5	Rodney C. Adkins	Senior Vice President - Systems and Technology (//Sr. VP/)	52	//2007	2007
6	Colleen F. Arnold	Senior Vice President - Application Management Services (//Sr. VP/)	53	//2010	2010
7	Erich Clementi	Senior Vice President - Global Technology Services (//Sr. VP/)	52	//2010	2010
8	Michael E. Daniels	Senior Vice President and Group Executive - Services (//Sr. VP/)	56	//2010	07/2005
9	John E. Kelly	Senior Vice President - Research and Intellectual Property (//Sr. VP/)	57	07/17/2007	2000
10	R. Frankin Kern	Senior Vice President - Global Business Services (//Sr. VP/)	57	01/21/2009	2008



47.4.15.7 Issues

This Web View can be used to display a company's stock issues.

The table provided below lists the parameters which can be used in the Issues Web View:

Parameter	Description
COMPANY	Parameter used for symbol resolution. It means you can specify 3rd-Party symbols and the application will resolve them to RICs.
SHOWTITLE	Defines whether to show title on the Web View.
SYMBOL	Defines symbol for which general information will be retrieved.
SYMBOLTYPE	Defines symbol type. Default is RIC.

To display issues information for IBM, the user submits the following request:

HTTP Sample Request - IBM Issues Information
http://views.rkd.reuters.com/views/snapshot/[appID]/issue.aspx?symbol=IBM.N

The user gets the following Web View as a result:

International Business Machines Corp.

Issues					
Type	Name	ID	RIC	Exchange	Most Recent Split
Common Stock (C)	Common Stock	1	IBM.N	NYSE	2 (27 May 1999)
Preferred Stock (P)	Preferred Stock- 7.5%	2		NYSE	



47.4.15.8 Industry Sectors

This Web View can be used to display information on what industry sectors the company is a component of.

The table provided below lists the parameters which can be used in the Industry Sectors Web View:



Parameter	Description
COMPANY	Parameter used for symbol resolution. It means you can specify 3rd-Party symbols and the application will resolve them to RICs.
SHOWTITLE	Defines whether to show title on the Web View.
SYMBOL	Defines symbol for which general information will be retrieved.
SYMBOLTYPE	Defines symbol type. Default is RIC.

To display industry information for IBM, the user submits the following request:

HTTP Sample Request - IBM Industry Sectors

[http://views.rkd.reuters.com/views/snapshot/\[appID\]/indinfo.aspx?symbol=IBM.N](http://views.rkd.reuters.com/views/snapshot/[appID]/indinfo.aspx?symbol=IBM.N)

The user gets the following Web View as a result:

International Business Machines Corp.

Industry Sectors (Peers)				
Order	Industry	Type	Code	Mnemonic
1	IT Services & Consulting	RBSS2004	57211	57211
1	Computer Services	MGINDUSTRY	1018	CMPSRV
1	Technology	MGSECTOR	10	TECHNO
1	Computer Systems Design Services	NAICS	541512	
2	Software Publishers	NAICS	51121	
3	Custom Computer Programming Services	NAICS	541511	
4	Electronic Computer Manufacturing	NAICS	334111	
7	Misc Business Credit Institutions	SIC	6159	
8	Computer Rental & Leasing	SIC	7377	
9	Holding Companies, Nec	SIC	6719	



47.4.15.9 Consensus Recommendations

This Web View can be used to display consensus recommendations for the company.

The table provided below lists the parameters which can be used in the Consensus Recommendations Web View:

Parameter	Description
COMPANY	Parameter used for symbol resolution. It means you can specify 3rd-Party symbols and the application will resolve them to RICs.
SHOWTITLE	Defines whether to show title on the Web View.
SYMBOL	Defines symbol for which general information will be retrieved.
SYMBOLTYPE	Defines symbol type. Default is RIC.

To display consensus information for IBM, the user submits the following request:

HTTP Sample Request - IBM Consensus Recommendations

[http://views.rkd.reuters.com/views/snapshot/\[appID\]/consrecs.aspx?symbol=IBM.N](http://views.rkd.reuters.com/views/snapshot/[appID]/consrecs.aspx?symbol=IBM.N)



The user gets the following Web View as a result:



47.4.15.10 Consensus Recommendations 2

This Web View can be used to get an alternative display of consensus recommendations for the company.

The table provided below lists the parameters which can be used in the Consensus Recommendations 2 Web View:

Parameter	Description
COMPANY	Parameter used for symbol resolution. It means you can specify 3rd-Party symbols and the application will resolve them to RICs.
SHOWTITLE	Defines whether to show title on the Web View.
SYMBOL	Defines symbol for which general information will be retrieved.
SYMBOLTYPE	Defines symbol type. Default is RIC.

To display alternative consensus recommendations for IBM, the user submits the following request:

HTTP Sample Request - IBM Consensus Recommendations 2
http://views.rkd.reuters.com/views/snapshot/[appID]/consrecs2.aspx?symbol=IBM.N

The user gets the following Web View as a result:



47.4.15.11 Price and Volume Summary

This Web View can be used to display price and volume information for a specific company.

The table provided below lists the parameters which can be used in the General Information Web View:

Parameter	Description
COMPANY	Parameter used for symbol resolution. It means you can specify 3rd-Party symbols and the application will resolve them to RICs.
LINK_QUOTE	Defines whether to display the link to the Full Quote report.
SCALEFACTOR	Defines scale for numbers. Possible values are: noscale, auto, thou, mil, bil.
SHOWTITLE	Defines whether to show title on the Web View.
SYMBOL	Defines symbol for which general information will be retrieved.
SYMBOLTYPE	Defines symbol type. Default is RIC.

To display price and volume summary for IBM, the user submits the following request:

HTTP Sample Request - IBM Price & Volume Summary
http://views.rkd.reuters.com/views/snapshot/[appID]/pricevol.aspx?symbol=IBM.N

The user gets the following Web View as a result:

International Business Machines Corp.

Price & Volume Summary	
Field Name	Value
Price - closing or last bid	166.56
Price - 12 month high	173.54
Price - 12 month low	120.61
Pricing date	01 June 2011 00:00
Volume - avg. trading volume for the last ten days	4.96
Enterprise Value	218749.5

[Full Quote](#)



47.4.15.12 Income Statement

This Web View can be used to display income information for a specific company.

The table provided below lists the parameters which can be used in the Income Statement Web View:

Parameter	Description
COMPANY	Parameter used for symbol resolution. It means you can specify 3rd-Party symbols and the application will resolve them to RICs.
LINK_INCSTAT	Defines whether to display the link to the Full Income Statement report.
SCALEFACTOR	Possible values are: noscale, auto, thou, mil, bil.
SHOWTITLE	Defines whether to show title on the Web View.
SYMBOL	Defines symbol for which general information will be retrieved.

SYMBOLTYPE	Defines symbol type. Default is RIC.

To display income information for IBM, the user submits the following request:

HTTP Sample Request - IBM Income Statement

```
http://views.rkd.reuters.com/views/snapshot/[appID]/incstat.aspx?symbol=IBM.N
```

The user gets the following Web View as a result:

International Business Machines Corp.	
Income Statement	
Field Name	Value
Market capitalization	201737.5
Revenue - trailing 12 months	101620
EBITD - trailing 12 months	23651
Net Income available to common - trailing 12 months	15095
Full Income Statement	
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47.4.15.13 Per Share Summary

This Web View can be used to display per share summary for a specific company.

The table provided below lists the parameters which can be used in the Per Share Summary Web View:

Parameter	Description
COMPANY	Parameter used for symbol resolution. It means you can specify 3rd-Party symbols and the application will resolve them to RICs.
LINK_RATIOS	Defines whether to display the link to the Full Ratios report.
SCALEFACTOR	Defines scale for numbers. Possible values are: noscale, auto, thou, mil, bil.
SHOWTITLE	Defines whether to show title on the Web View.
SYMBOL	Defines symbol for which general information will be retrieved.
SYMBOLTYPE	Defines symbol type. Default is RIC.

To display per share information for IBM, the user submits the following request:

HTTP Sample Request - IBM Per Share Summary

```
http://views.rkd.reuters.com/views/snapshot/[appID]/pershrsum.aspx?symbol=IBM.N
```

The user gets the following Web View as a result:

International Business Machines Corp.

Per Share Summary	
Field Name	Value
EPS excluding extraordinary items - trailing 12 months	11.92
Revenue/share - trailing 12 months	80.21
Book value per share - most recent quarter	18.72
Cash per share - most recent quarter	10.94
Cash Flow per share - trailing 12 months	15.74
Dividends per share - trailing 12 months	2.6
Full Ratios	



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47.4.15.14 Ratios Summary

This Web View can be used to display pre-calculated ratios summary for a specific company.

The table provided below lists the parameters which can be used in the Ratios Summary Web View:

Parameter	Description
COMPANY	Parameter used for symbol resolution. It means you can specify 3rd-Party symbols and the application will resolve them to RICs.
LINK_RATIOS	Defines whether to display the link to the Full Ratios report.
SCALEFACTOR	Defines scale for numbers. Possible values are: noscale, auto, thou, mil, bil.
SHOWTITLE	Defines whether to show title on the Web View.
SYMBOL	Defines symbol for which general information will be retrieved.
SYMBOLTYPE	Defines symbol type. Default is RIC.

To display ratios information for IBM, the user submits the following request:

HTTP Sample Request - IBM Ratios Summary
http://views.rkd.reuters.com/views/snapshot/[appID]/ratiossum.aspx?symbol=IBM.N

The user gets the following Web View as a result:



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International Business Machines Corp.

Ratios Summary	
Field Name	Value
Gross Margin - trailing 12 months	46.15
Return on average equity - trailing 12 months	67.53
Price to sales - trailing 12 months	1.99
P/E excluding extraordinary items - TTM	13.98
Price to Book - most recent quarter	8.9
Employees	426751
Full Ratios	



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47.4.15.15 Forecast Summary

This Web View can be used to display forecast information for a specific company.

The table provided below lists the parameters which can be used in the Forecast Summary Web View:

Parameter	Description
COMPANY	Parameter used for symbol resolution. It means you can specify 3rd-Party symbols and the application will resolve them to RICs.
LINK_CONSESTS	Defines whether to display the link to the Full Consensus Estimates report.
SCALEFACTOR	Defines scale for numbers. Possible values are: noscale, auto, thou, mil, bil.
SHOWTITLE	Defines whether to show title on the Web View.
SYMBOL	Defines symbol for which general information will be retrieved.
SYMBOLTYPE	Defines symbol type. Default is RIC.

To display forecast information for IBM, the user submits the following request:

HTTP Sample Request - IBM Forecast Summary
http://views.rkd.reuters.com/views/snapshot/[appID]/forecastsum.aspx?symbol=IBM.N

The user gets the following Web View as a result:



THOMSON REUTERS

International Business Machines Corp.

Current Fiscal Year/End Month:	2011/12	Consensus Type:	Mean
Current Interim/End Month:	2011/6	Earnings Basis:	PRX
Forecast Summary			
Field Name	Value		
ConsRecom	1.96		
TargetPrice	179.3		
ProjLTGrowthRate	10.71		
ProjPE	12.63		
ProjSales	105669.09		
ProjSalesQ	25324.9		
ProjEPS	13.19		
ProjEPSQ	3.02		
ProjProfit	NA		
ProjDPS	2.68		
Full Consensus Estimates			



47.4.16 Screener

The Screener Web Views include the following two Web Views:

- **Fund Screener** provides easy tools for screening against the Lipper Fund Universe. Users can screen using multiple variables, create/modify and save screeners as well as create/modify and save reports within the report builder tool.
- **Equity Screener** provides easy tools for screening companies. Users can screen using multiple variables, create/modify and save screeners as well as create/modify and save reports within the report builder tool.

47.4.16.1 Fund Screener

This Web View provides easy access to funds from Lipper's extensive database of collective investments, allowing clients to quickly find funds based on hundreds of criteria items and to compare those funds across a wide range of timely characteristics. This information includes fundamental, financial, analytical, statistical, and research data.

The table provided below lists the parameters which can be used for the Fund Screener Web View:

Parameter	Description
ASSETUNIVERSE	Defines asset's universe code.
CURRENCY	The currency code of the currency.
DYNAMIC_UPDATE	Defines whether to update matches results, after the users changes any criteria.
MATCHES	Defines whether to show found number of matches.
OUTPUT	Defines the format of the output file - either HTML or XLS.
PAGE	This parameter is used to navigate between pages.
PAGESIZE	(Optional) The number of records to display per page.
REPORT_CUSTOM	A numerical value that defines the ID of a previously saved report (set and order of fields to be shown in the resulting table). The saved report formats can be selected from a drop-down.
REPORT_ITEMS	An array of defining set and order of fields in the resulting table.

REPORTBUILDER	Defines whether to show the Report Builder link on the form.
SAVE	Defines whether to show the drop-down with the saved requests (saved screens) on the form.
SCALEFACTOR	Defines scale for numbers. Possible values are: noscale, auto, thou, mil, bil.
SCR_CRITERIA	Defines screening criteria in the form of numerical IDs, which can be defined in the following format: [variable_name],[value],[operation],[operator],...,[value],[operation],[operator]]. F.e.: [scr_criteria]=1034,1035,equal,or,1036,equal 32300,equal
SCR_NAME	Sets the name for the search.
SCR_SHOWRESULT	Defines whether to display search results.
SCR_SORT	Defines the variable by which the application must sort the results.
SCR_SORTORDER	Sets the sorting order for the found results (ascending or descending).
SCR_TITLE	Allows to set a customized title for the page.
SCREEN_CUSTOM	A numerical value defining the ID of a previously saved search (list of specified criteria, form, etc). The user can select a saved search from the corresponding drop-down list.
SHOWFORM	Defines whether to show results screen in the frame or not.
TOOLTIP	Defines whether to display tooltip.
UNIVERSE	The alphabetic universe code.
XLS	Displays the button for outputting data to XLS file.

HTTP Sample Request - Default Fund Screener Web View

```
http://views.rkd.reuters.com/views/screener/[appID]/fund.aspx?scr_criteria=1034,1035,equal,or,1036,equal
```

The following default Web View is displayed by default:

Thomson Reuters Knowledge Direct Screener



The user needs to add specific criteria and click **Run** to display the found results.

HTTP Sample Request - Funds Screener Web View with Added Criteria and Results List

```
http://views.rkd.reuters.com/views/screener/[appID]/fund.aspx?scr_criteria=1034%2C1035%2Cequal%2Cor%2C1036%2Cequal%7C1041%2C1115%2Cequal%2Cor%2C1060%2Cequal%7C393%2Ca%2Cstartswith&scr_advanced=&scr_showresult=true&report_items=30521%7C1034%7C1041%7C28029%7C30681%7C25360%7C5703%7C37341%7C393&asset_universe=28033
```

The following Web View will be displayed as a result:

Thomson Reuters Knowledge Direct Screener

Equity Funds

Asset Universe: Closed End Funds Category Matches: 1116 Cumulative Matches: 1116

Key Fields

Asset Type: Equal Money Market Or Remove ☒ Cumulative Matches: 305

Equal Equity Or Remove

Add | Add Many...

Geographical Focus: Equal United States of America Or Remove ☒ Cumulative Matches: 193

Equal Europe Or Remove

Add | Add Many...

Administrator: Starts With a Or Remove ☒ Cumulative Matches: 11

Add

Add More Filters...

Saved Screen: <New> Save Report Builder... Run

Fund Screener Results

Viewing 1-10 of 11 Results Items/Page 10 Base Currency USD

Asset Name	Asset Type	Geographical Focus	Currency Of Record	Latest Fund Value (TNA)	Launch Date	Relative Performance - Year To Date	Relative Performance YTD Rank	Administrator
Adams Express Co	Equity	United States of America	US Dollar	1175300000	29 October 1959 19:00	-1.93	143118	Adams Express Company
Petroleum & Resources Corp	Equity	United States of America	US Dollar	878100000	20 January 1969 19:00	4.85	10468	Adams Express Company

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Report Builder

The users can also use the Report Builder on the Request Builder by clicking the "Report Builder..." button.

The Report Builder allows the users to use the default report, create their own reports or load and modify (if necessary) a report previously built and saved by them or other effective users:

Report Builder

Search: Fund Clear

Attributes

- Asset Attributes
 - Fund Type (US)
- Localised Attributes
 - Austrian Fund Type
 - Gilt-Edged Fund
 - HK Primary Fund

Add >

< Remove

<< Remove All

Report Columns:

- Asset Name
- Asset Type
- Geographical Focus
- Currency of record
- Latest Fund Value (TNA)
- Launch Date
- Relative Performance - Year to Date

Move Items Reset

Custom Report: <New> Test Save Apply Cancel

47.4.16.2 Equity Screener

This Web View can be used for filtering companies according to a set of criteria and returning information about those companies.

The table provided below lists the parameters which can be used for the Lipper Equity Screener Web View:

Parameter	Description
ADVANCE_SEARCH	Defines whether to display the advanced search link on the form.
DYNAMIC_UPDATE	Defines whether to update matches results, after the users changes any criteria.
MATCHES	Defines whether to show found number of matches.
OUTPUT	Defines the format of the output file - either HTML or XLS.
PAGE	This parameter is used to navigate between pages.
PAGESIZE	(Optional) The number of records to display per page.
REGION	Defines the region code.
REPORT_CUSTOM	A numerical value that defines the ID of a previously saved report (set and order of fields to be shown in the resulting table). The saved report formats can be selected from a drop-down.
REPORT_ITEMS	An array of defining set and order of fields in the resulting table.
REPORTBUILDER	Defines whether to show the Report Builder link on the form.
SAVE	Defines whether to show the drop-down with the saved requests (saved screens) on the form.
SCALEFACTOR	Defines scale for numbers. Possible values are: noscale, auto, thou, mil, bil.
SCR_ADVANCED	Sets the expression (key fields) for an advanced search. F.e: scr_advanced=(is in set({regiondescr},{ap,eu,na})) and (is in set({sectordescr},{basicm,capgds,conglo,cyclic,energy,financ,health,noncyc,servic,techno,transp,utilit})) and (startswith({name},'d') Or contains ({name},'a')) and ({price}>20)
SCR_CRITERIA	Defines screening criteria in the form of string IDs, which can be defined in the following format: [variable_name],[value],[operation],[operator],...,[value],[operation],[operator]}. F.e.: [scr_criteria]=name,ddd,startswith,or,a,contains price,20,greaterthan
SCR_NEWNAME	Sets the name for a newly created report or saved screen.
SCR_SHOWRESULT	Defines whether to display search results.
SCR_SORT	Defines the variable by which the application must sort the results.
SCR_SORTORDER	Sets the sorting order for the found results (ascending or descending).
SCR_TITLE	Allows to set a customized title for the page.
SCREEN_CUSTOM	A numerical value defining the ID of a previously saved search (list of specified criteria, form, etc). The user can select a saved search from the corresponding drop-down list.
SECTOR	Industry code based on Thomson Reuters strategic classification - TRBC.
SHOWFORM	Defines whether to show results screen in the frame or not.
TOOLTIP	Defines whether to display tooltip.
XLS	Displays the button for outputting data to XLS file.

The following is an example of default Equity Screener Web View request:

HTTP Sample Request - Default Equity Screener Web View
http://views.rkd.reuters.com/views/screener/[appID]/equity.aspx?scr_criteria=name,d,startswith,or,a,contains price,20,greaterthan

The user gets the following Web View as a result:



Thomson Reuters Knowledge Direct Screener

Equity Funds

Region Name: <Any> Category Matches: 69103 Cumulative Matches: 69103
 Sector: <Any> Category Matches: 73491 Cumulative Matches: 69103

Key Fields In Report

Company Name Starts With d Or Remove ☒ Cumulative Matches: 57049
 Contains a Or Remove ☐
 Add

Price Greater Than 20 Or Remove ☒ Cumulative Matches: 18204
 Add

Add More Filters... Advanced

Saved Screen: <New> Save Report Builder... Run



The user needs to add specific criteria and click **Run** to display the found results.

Thomson Reuters Knowledge Direct Screener

Equity Funds

Region Name: <Any> Category Matches: 69253 Cumulative Matches: 69253
 Sector: <Any> Category Matches: 73636 Cumulative Matches: 69253

Key Fields In Report

Company Name Starts With d Or Remove ☒ Cumulative Matches: 2529
 Add

Market Capitalization In USD (Millions) Greater Than 10000 Or Remove ☐ Cumulative Matches: 43
 Add

Add More Filters... Advanced

Saved Screen: <New> Save Report Builder... Run

Equity Screener Results

Viewing 1-10 of 43 Results Items/Page 10

Company Name	Company Ticker Symbol	Market Capitalization (Millions)	Price	Total Revenue - Last Interim Period, USD	Dividends Per Share, TTM (\$ Per Share)	Consensus Recommendation (On 1-5 Scale),...
Dongfeng Motor Group Co., Ltd	0489	121142.65	14.06	9342.61	0.22	1.88
Deutsche Telekom AG (ADR)	DTEGY	65627.22	15.25	15550.74	2.02	2.33
DP World Limited	DPW	10209	12.3	1664.62	17.2	2.23

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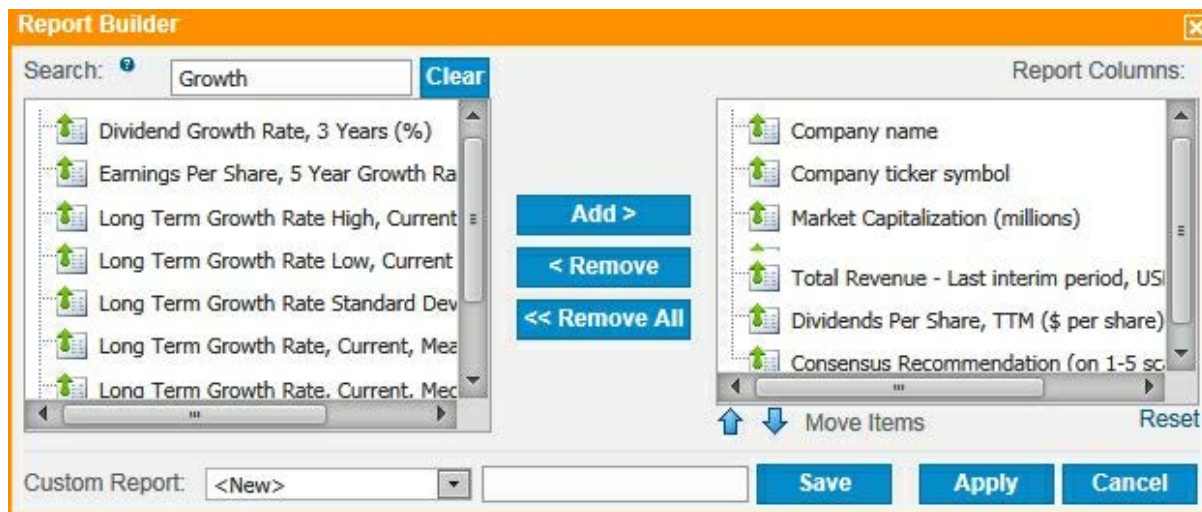
HTTP Sample Request - Equity Screener Web View with Added Criteria and Results List

http://views.rkd.reuters.com/views/screener/[appID]/equity.aspx?scr_criteria=name,d,startswith,or,a,contains|price,20,greaterthan

Report Builder

The users can also use the Report Builder on the Request Builder by clicking the **"Report Builder..."** button.

The Report Builder allows the users to use the default report, create their own reports or load and modify (if necessary) a report previously built and saved by them or other effective users:



47.4.17 Watchlist Editor

The Watchlist Editor allows the users to create, edit, save and delete their own watchlists. The users can display their watchlists with specific fields they have chosen and see related content for each stock in their lists.

The table provided below lists the parameters which can be used in the Watchlist Editor.

Parameter	Description
OUTPUT	Defines the format of the output file - either HTML or XLS.
SHOWDEL	Defines whether to show the Delete link.
SHOWEDIT	Defines whether to display the Edit link.
SHOWNEWLIST	Defines whether to display the New List link that allows to create a new watchlist.
SORTING	Defines sorting order.
XLS	Displays the button for outputting data to XLS file.

To display available watchlists, the user submits the following URL:

HTTP Sample Request - Watchlist Default View
http://views.rkd.reuters.com/views/watchlisteditor/[appID]/default.aspx

If no watchlists were created, the user gets the following Web View as a result:



To create a new watchlist, you need to use the List Editor (click New List).

The API will display the following window:



List Editor

List Name:

Symbols: [Add](#) Fields: [Add](#)

[Save](#) [Cancel](#)



You need to specify list name, add necessary symbols (RICs) and required fields (FIDs):

List Editor

List Name:

Symbols: [×](#)

[×](#)

[×](#)

[×](#)

[×](#)

[×](#)

[×](#)

[×](#)

[×](#)

[Add](#)

Fields: [×](#)

[×](#)

[×](#)

[×](#)

[×](#)

[×](#)

[×](#)

[×](#)

[×](#)

[Add](#)

[Save](#) [Cancel](#)



The table below lists the parameters which can be used for in the List Editor:

Parameter	Description
FIDS	Lists FIDS that were included into the watchlist.
LISTNAME	Defines new watchlist name.
OLDLISTNAME	Shows the old watchlist name.
OPERATION	Defines operation name. Has the following values: none, add, remove, createlist, deletelist.
RICS	Defines the Reuters Instrument Code.
URLREDIRECT	Defines whether to display the URL redirect link.

After you have created necessary watchlists, they will be displayed on the default Watchlist Web View:

My Watchlists New List

Watchlist Name	No of Constituents		
Watchlist 1	9		
Watchlist1	3		
JF_LIST_5	5		
my list	5		
list111	1		
list1234	3		
list123	2		
Any	2		
11235813	2		



Now, by clicking necessary watchlist name in the list, you can display the configured fields (FIDs) for the companies (RICs) you specified in that specific Watchlist:

Watchlist 1 Base Currency:

Company	Bid	Ask	Volume	Currency	Exchange	Last Price	Name	Net Change	Tick	
GOOGLE	483.01	486.87	0	USD	NSQ	487.01	GOOGLE	0		
INTL BUS MACHINE	0	0	0	USD	NYS	165.68	INTL BUS MACHINE	0		
MICROSOFT CP	24.5	24.56	0	USD	NSQ	24.65	MICROSOFT CP	0		
VODAFONE GROUP	163.75	163.8	22600981	GBP	LSE	163.75	VODAFONE GROUP	-0.65		
ROLLS ROYCE PLC	590	590.5	1172156	GBP	LSE	590	ROLLS ROYCE PLC	-11.5		
3M COMPANY	0	0	0	USD	NYS	92.8	3M COMPANY	0		
MITSUB UFJ FG	371	372	46654600	JPY	TYO	371	MITSUB UFJ FG	0		
MITSUBI-SOKO	301	303	217000	JPY	TYO	301	MITSUBI-SOKO	-4		
FIAT	7.12	7.12	6901385	EUR	MIL	7.12	FIAT	-0.05		

New Symbol: Add



The table below lists the parameters which can be used in a watchlist:

Parameter	Description
LISTNAME	Defines the name for the watchlist.
OUTPUT	Defines the format of the output file - either HTML or XLS.
SHOWDEL	Defines whether to show the Delete link.
SHOWEDIT	Defines whether to display the Edit link.
SORTING	Defines sorting order.
XLS	Displays the button for outputting data to XLS file.

47.4.18 Sector & Country Web View

You can use the Sector & Country Web Views to retrieve a succinct summary of recent activity for a specific country or sector and a means to navigate to related information.



47.4.18.1 Trends by Price

The Trends by Price Web View can be used to display a list of top gainers and top losers for the specified Exchange based on Price change since the previous day traded in percentage.

The table below specifies available input parameters for the Trends by Price input:

Parameter	Description
ERROR	(Optional) true/false.
EXCH	Define the Exchange the top gainers/losers should be shown for.
FIDS	Defines the columns to display. Default is company name, last price, % change and market capitalization.
MAXHEADLINES	Maximum number of items to retrieve (default 5).
SORTING	Defines the sorting order - descending (default) or ascending.

HTTP Sample Request - Trends by Price for London SE (All Alpha Shares)

[http://views.rkd.reuters.com/views/countryandsector/\[appID\]/trendsbyprice.aspx?exch=GB-L&basecurrency=GBP](http://views.rkd.reuters.com/views/countryandsector/[appID]/trendsbyprice.aspx?exch=GB-L&basecurrency=GBP)

The user will get a Web View similar to this:

Price | Volume

Base Currency:

Top Gainers			
Company	Last Price	% Change	Mkt Capitalization
PERSONAL ASSETS 	331.99	0.45% 	0
RIO TINTO 	33.86	3.12% 	0
CAPITAL GEARING 	30.11	3.32% 	0
ANGLO AMERICAN 	23.76	3.06% 	0
RANDGOLD RES. 	65.4	0.93% 	0
Top Losers			
Company	Last Price	% Change	Mkt Capitalization
IMMUNODIAGNOSTIC 	9.28	-6.38% 	0
SEVERN TRENT 	15.27	-1.42% 	0
3LEGS RES 	1.51	-10.83% 	0
BRAEMAR SHIP SER 	3.19	-4.94% 	0
GENUS 	10.35	-1.43% 	0



Company Name contains the **link to Quote Web View** for the corresponding company.

Related content icon next to the company name shows the links to the following:

- Quotes
- News
- Significant Developments
- Charts

- **Consensus Estimates**
- **Recommendations**
- **Financial Description**

47.4.18.2 Trends by Volume

The Trends by Price Web View can be used to display a list of top 10 Leaders for the specified Exchange based on Volume Traded since the previous day.

The table below specifies available input parameters for the Trends by Volume input:

Parameter	Description
ERROR	(Optional) true/false.
EXCH	Defines the Exchange the volume leaders should be shown for.
FIDS	Defines the columns to display. Default is Company Name, Last price, Net Change, % Change and Volume.
MAXHEADLINES	Maximum number of items to retrieve (default 10).
SORTING	Defines the sorting order - descending (default) or ascending.

HTTP Sample Request - Trends by Volume for London SE (All Alpha Shares)

[http://views.rkd.reuters.com/views/countryandsector/\[appID\]/trendsbyvol.aspx?exch=GB-L&basecurrency=GBP](http://views.rkd.reuters.com/views/countryandsector/[appID]/trendsbyvol.aspx?exch=GB-L&basecurrency=GBP)

The user will get a Web View similar to this:

United Kingdom
All Alpha Shares
Search

Price | Volume
Base Currency: GBP

Company	Last Price	Net Change	% Change	Volume
LLOYDS BNK GRP	0.34	0	-1.21%	108972246
ROYAL BANK SCOT	0.25	0.01	2.9%	41675643
RANGE RESOURCES	0.1	0.02	19.45%	39090466
DOMINION PTRLM	0.05	0	-1.83%	35783297
BARCLAYS	1.79	0.05	3.15%	31020469
PREMIER FOODS	0.05	0	8.73%	29506540
BANK IRELAND	0.09	0	1.02%	23555040
VICTORIA OIL	0.04	0	1.92%	19168764
VODAFONE GROUP	1.74	0	-0.06%	18738160
BOWLEVEN	1.18	0.42	56.15%	17582663



Company Name contains the **link to Quote Web View** for the corresponding company.

Related content icon next to the company name shows the links to the following:

- **Quotes**
- **News**
- **Significant Developments**
- **Charts**
- **Consensus Estimates**
- **Recommendations**
- **Financial Description**

47.4.18.3 Cross Rates

The Cross Rates Web View can be used to view the cross rates for the selected currency against other currencies.

The table below specifies available input parameters for the Cross Rates input:

Parameter	Description
CURRENCY	Defines the currency code the cross rates should be retrieved for.
ERROR	(Optional) true or false.
FIDS	Defines the columns to display. Default is Cross Rate Name, Bid/Ask and Change, % Change and Volume.
SORTING	Defines the sorting order - descending (default) or ascending.

HTTP Sample Request - Cross Rates for British Pound

[http://views.rkd.reuters.com/views/countryandsector/\[appID\]/rates.aspx?currency=GBP](http://views.rkd.reuters.com/views/countryandsector/[appID]/rates.aspx?currency=GBP)

The user will get a Web View similar to this:

Currency: GBP 		
Currency Cross	Bid/Ask	Change
GBP/AED	5.81/5.82	0.03 (0.47%) ↑
AUD/GBP	0.65/0.65	0 (0.74%) ↑
GBP/AMD	591.27/594.63	0 (0.51%) ↑
CAD/GBP	0.62/0.62	0 (0.4%) ↑
GBP/ANG	2.77/0	0 (-0.17%) ↓
CHF/GBP	0.71/0.71	0 (0.33%) ↑
GBP/ARS	6.67/6.68	0 (0.46%) ↑
COP/GBP	0.03/0.03	0 (-0.09%) ↓
GBP/AUD	1.54/1.54	-0.01 (-0.76%) ↓
CZK/GBP	0.04/0.04	0 (0.54%) ↑
GBP/BBD	3.15/0	0 (0.45%) ↑
DKK/GBP	0.12/0.12	0 (0.34%) ↑
GBP/BGN	2.23/2.23	0 (-0.39%) ↓
GBP/ZWD	599/603	0 (0.5%) ↑



By clicking on a cross rate you can open the Quotes Web View for that cross rate.

47.4.18.4 Constituents

The Constituents Web View can be used to display chain view of constituents for the chosen index.

The full list of indices available can be found in TRKD Web Views Enhanced Quotes and Country Sector Data Guide.



The table below specifies available input parameters for the Constituents Web View input:

Parameter	Description
ERROR	(Optional) true/false.
FIDS	Defines the columns to display. Default is Company Name, Last price, Day Range and Market Capitalization.
INDEX	Defines the index code for which constituents should be displayed.
PAGE	This parameter is used to navigate between pages. (Example: page=2)
PAGESIZE	Number of items to display on a page (default 10).
SID	(Optional) Cache key used for paging.
SORTING	Defines the sorting order - descending (default) or ascending.

HTTP Sample Request - Constituents for US Air Freight and Courier Services Sector

[http://views.rkd.reuters.com/views/countryandsector/\[appID\]/constituents.aspx?index=0#.TRXFLDUSPAIRF](http://views.rkd.reuters.com/views/countryandsector/[appID]/constituents.aspx?index=0#.TRXFLDUSPAIRF)

The user will get a Web View similar to this:

Constituents			
Company	Last Price	Day Range	Mkt Capitalization
ATLAS AIR WORLD	35.76	35.04-35.83	0
EXPEDITORS	44.22	44.06-44.66	0
FEDEX CORP	75.3	74.67-75.81	0
FORWARD AIR CP	29.76	29.65-30.13	0
UNITED PARCEL B	68.56	68.56-69.28	0
UTI WORLDWIDE	15.38	15.26-15.48	0



Note: Each constituent name links to the Quote view for that stock and columns are sortable.

47.4.18.5 Significant Developments

The Significant Developments Web View under Country & Sector section can be used to display a list of 10 Significant developments headlines for a given Sector and type of Significant Developments.

The full list of sector codes available can be found in TRKD Web Views Enhanced Quotes and Country Sector Data Guide.

The table below specifies available input parameters for the Significant Developments Web View input:

Parameter	Description
MAXHEADLINES	(Optional) Maximum number of items to retrieve (default 10).
ORDERBY	(Optional) Defines the sorting order. Possible values are: none, a_date, d_date, a_topic, d_topic, a_company, d_company, a_headline, d_headline.
PAGE	(Optional) This parameter is used to navigate between pages. (Example: page=2)
PAGESIZE	(Optional) Number of items to display on a page (default 10).
SECTOR	Defines the sector code for which the significant development headlines should be retrieved.
SID	(Optional) Cache key used for paging.
SIGNIFICANCE	(Optional) Defines the level of significance for headlines to be retrieved. Possible values are: high, highmedium, all (default).

HTTP Sample Request - Significant Developments for Energy Sector

[http://views.rkd.reuters.com/views/countryandsector/\[appID\]/sigdev.aspx?significance=all&maxheadlines=30&sector=50](http://views.rkd.reuters.com/views/countryandsector/[appID]/sigdev.aspx?significance=all&maxheadlines=30&sector=50)

The user will get a Web View similar to this:

Release Date	Company	Headline	Topic
14 October 2011 09:00	WSX.V	Wild Stream Exploration Inc Revises FY 2011 Production Guidance	General Products
14 October 2011 09:00	TET.TO	Trilogy Energy Corp. Announces October Dividend	Dividends
14 October 2011 08:22	WSLJ.J	Wescoal Holdings Ltd. Announces Appointment Of New Auditors	Other Accounting
14 October 2011 08:00	PHX.TO	PHX Energy Services Corp Announces October 2011 Dividend	Dividends
14 October 2011 06:44	PBGG.WA	HYDROBUDOWA POLSKA SA, PBG SA, APRIVIA SA, PRG Metro Sp. z o.o. and OBRASCON HUARTE LAIN SA Sign Contract to Build a Road Connecting Gdansk Airport with Gdansk Harbor	Strategic Combinations, Business Deals
14 October 2011 06:31	GAZP.MM	Gazprom OAO Raises \$200 Million For General Corporate Purposes-DJ	Debt Financing / Related
14 October 2011 06:27	PETR.KL	Petronas Dagangan Berhad Announces Ownership Interest Of Employees Provident Fund Board	Equity Investments
14 October 2011 04:53	VWS.CO	Vestas Wind Systems A/S Receives 99 V90-1.8 Megawatt Wind Turbine Order	Business Deals
14 October 2011 03:45	TORM.CO	Torm A/S Sells Two Product Tankers and Maintains FY 2011 Financial Guidance	Divestitures, Other Earnings Pre-Announcement
14 October 2011 03:08	KRS.MI	Jangsu Zongyi Group inc to Enter in the Share Capital of Kerself SpA through Subscription of an EUR 20 Million Stake in the Kerself SpA's EUR 50 Million Capital Increase	Equity Financing / Related, Equity Investments

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THOMSON REUTERS

Note: By clicking on a headline you can display the story in a target frame.

47.4.18.6 Sector Performance

The Sector Performance Web View can be used to display a summary of performance for specific sector and country.

The table below specifies available input parameters for the Sector Performance Web View input:

Parameter	Description
COUNTRY	The country for which sector performance should be returned.
SECTOR	Defines the sector for which performance should be returned.

HTTP Sample Request - Performance Summary for Financials Sector in Great Britain

[http://views.rkd.reuters.com/views/countryandsector/\[appID\]/sectorperformance.aspx?country=GB&sector=55](http://views.rkd.reuters.com/views/countryandsector/[appID]/sectorperformance.aspx?country=GB&sector=55)

The user will get a Web View similar to this:

United Kingdom > Financials

Sector	% Change	Down/Up
Banking & Investment Services	0.09% ↑	
Insurance	0.01% ↑	
Real Estate	0.18% ↑	
Investment Trusts	0.2% ↑	



THOMSON REUTERS

Note: Each sector name links to the Sector Performance view for that sector only.

The colors have the following meaning:

Color	Description



THOMSON REUTERS

Dark Green	represents the percentage of companies trading in the positive and above the average
Light Green	represents the percentage of companies trading in the positive and below the average
Light Red	represents the percentage of companies trading in the negative and above the average
Dark Red	represents the percentage of companies trading in the negative and below the average

47.4.18.7 Country and Sector Indices

The Country and Sector Indices Web View is used to display indices overview for the specific country and sector.

The full list of indices available can be found in TRKD Web Views Enhanced Quotes and Country Sector Data Guide.

The table below specifies available input parameters for this Web View input:

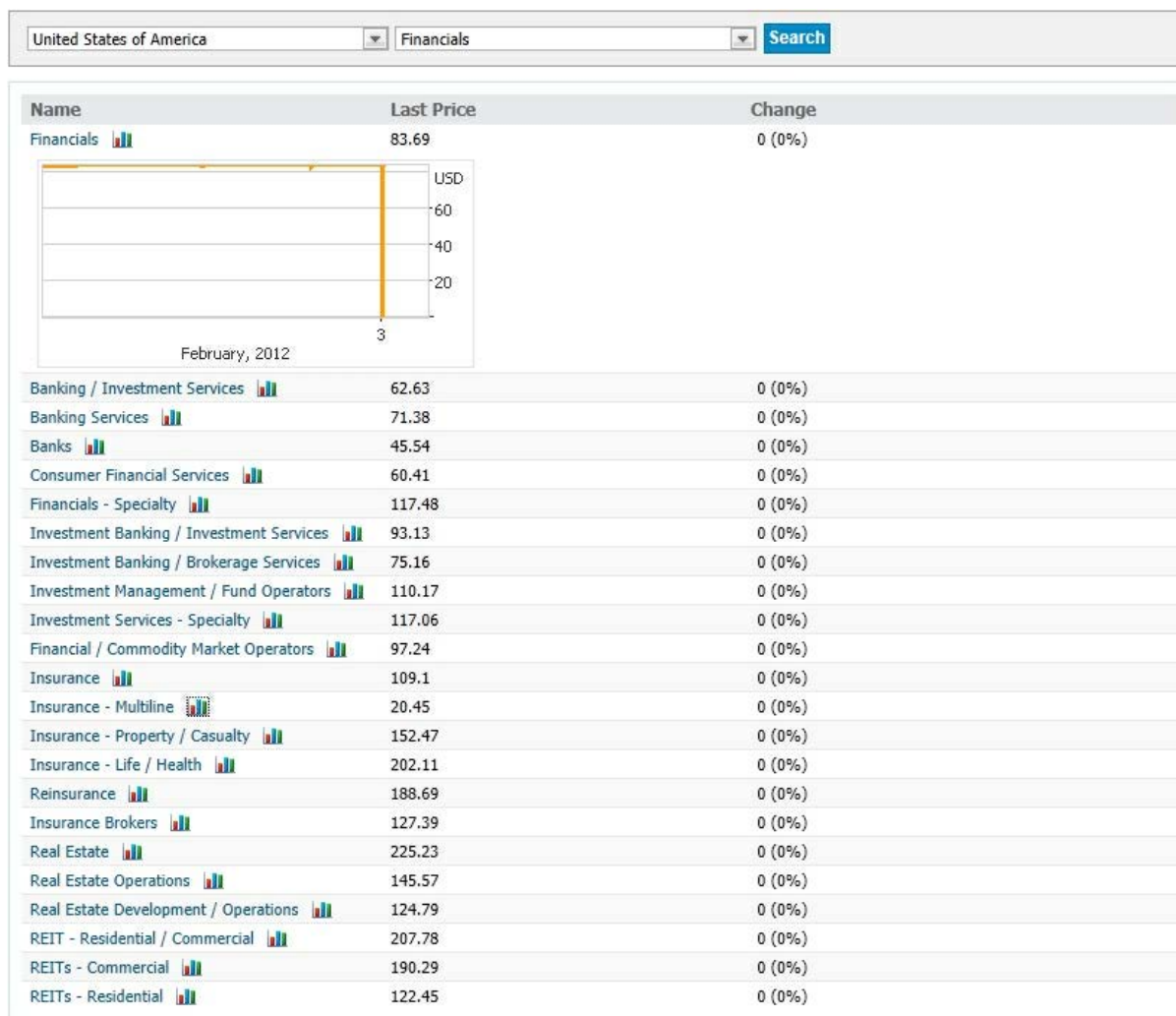
Parameter	Description
CHART	Defines type of chart to be displayed. Possible values are: none, inline or popup.
COUNTRY	The country for which sector indices should be returned.
ERROR	(Optional) true/false.
FIDS	Defines the columns to display. Default is Company Name, Last Price and Change.
PRICETYPE	Defines what type of price to return. Possible values are: priceonly and totalreturn.
SECTOR	Defines the sector for which indices should be returned.

HTTP Sample Request - Index View for Financials Sector of USA

[http://views.rkd.reuters.com/views/countryandsector/\[appID\]/countrysectorindices.aspx?country=US&sector=55](http://views.rkd.reuters.com/views/countryandsector/[appID]/countrysectorindices.aspx?country=US&sector=55)

The user will get a Web View similar to this:





Note: Each Index name links to the Index Details Web View.

47.4.18.8 Regional Indices

The Regional Indices Web View can be used to display index details for the specified region.

The full list of indices available can be found in TRKD Web Views Enhanced Quotes and Country Sector Data Guide.

The table below specifies available input parameters for the Regional Indices Web View input:

Parameter	Description
CHART	Defines type of chart to be displayed. Possible values are: none, inline or popup.
ERROR	(Optional) true/false.
FIDS	Defines the columns to display. Default is Company Name, Last Price and Change.
REGION	Defines the region for which indices should be returned. Possible values are: glb, us, eur, apc, ame.
SHOWTABS	Defines whether to show tabs at the top of the View.
TABS	Specifies what tabs to display at the top of the View. Possible values are: glb, us, eur, apc, ame.

HTTP Sample Request - Global Regional Index View

[http://views.rkd.reuters.com/views/countryandsector/\[appId\]/regionalindices.aspx?region=GLB](http://views.rkd.reuters.com/views/countryandsector/[appId]/regionalindices.aspx?region=GLB)

The user will get a Web View similar to this:



Note: Each index name links to the Index Details Web View for the selected index.

47.4.18.9 Index Details

The Index Details Web View can be used to display index details for the specified index. The details include the following components: quotes header, constituents, chart and news.

The full list of indices available can be found in TRKD Web Views Enhanced Quotes and Country Sector Data Guide.

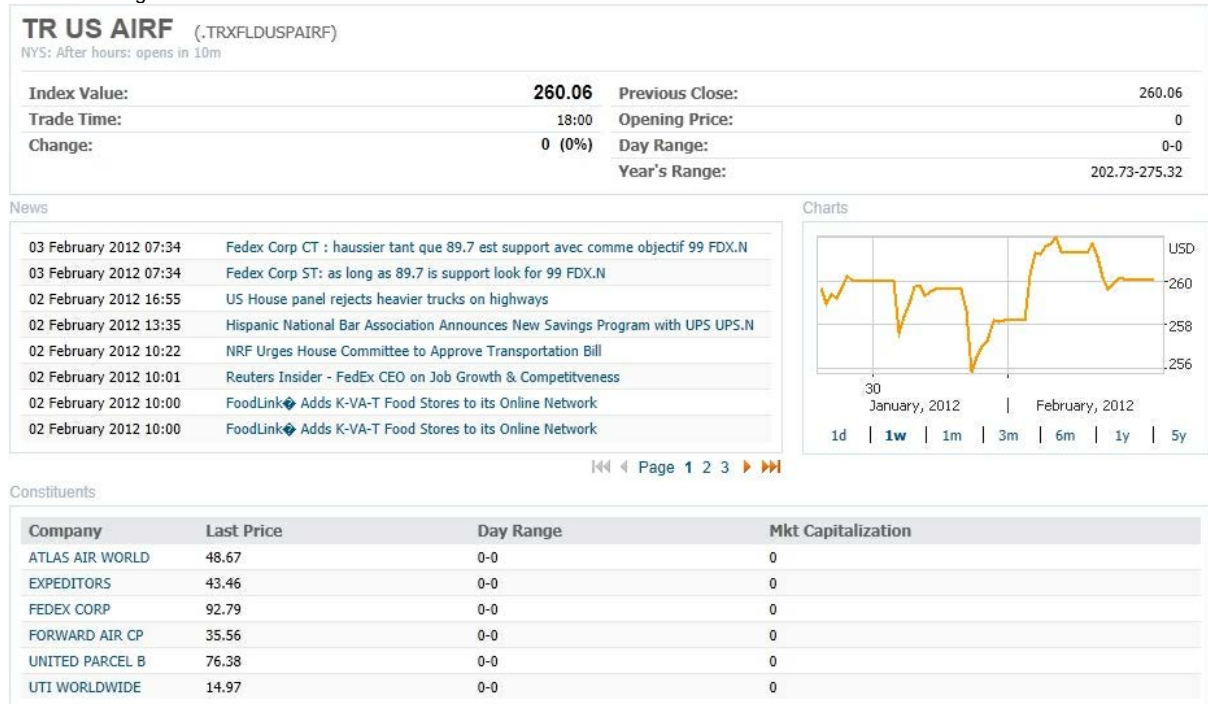
The table below specifies available input parameters for the Index Details Web View input:

Parameter	Description
LANGUAGE	Language in which the Views will be shown.
MAXHEADLINES	(Optional) The maximum number of headlines to be retrieved by the view. Default is 24.
PAGE_C	Sets the number of page of with constituents to be loaded.
PAGE_N	Sets the number of page of with news to be loaded.
PAGESIZE_C	Defines number of constituents to be displayed on a page. Default is 10.
PAGESIZE_N	Defines number of news to be displayed on a page. Default is 8.
PERIOD	(Optional) Granularity of data to display (minute, hourly, daily, weekly, monthly, quarterly, yearly, mins30). Defaults to hourly.
RIC	Reuters Instrument Code for the index to display.
SID_C	(Optional) Cache key used for constituents paging.
SID_N	(Optional) Cache key used for news paging.
SORTING	Defines the sorting order - descending (default) or ascending.
STARTDATE	(Optional) The starting date for the last headlines to be retrieved - in UTC (GMT+0) format.

HTTP Sample Request - Index Details for US Air Freight and Courier Services Sector

[http://views.rkd.reuters.com/views/countryandsector/\[appID\]/indexdetails.aspx?ric=.TRXFLDUSPAIRF](http://views.rkd.reuters.com/views/countryandsector/[appID]/indexdetails.aspx?ric=.TRXFLDUSPAIRF)

The user will get a Web View similar to this:



47.4.18.10 Market Map

The Market Map Web View can be used to display a market map composed of all sectors in a specified country or region. A market map displays data as a set of nested rectangles. Companies are represented by rectangles colored green for price increase, and red for price decrease. The size of a rectangle is determined by the market capitalization of a company.

The table below specifies available input parameters for the Market Map Web View:

Parameter	Description
CHANGEDSINCE	Allows to select the parameter to be visualized: - oneday - closing price - sixmonths - average price for 26 weeks - oneyear - average price for 52 weeks - ytd - average price for the period from the beginning of the year till the current date
COMPANIES_PER_INDUSTRY	Defines the number of companies to be displayed per industry. The default is 10.
COUNTRY	The country for which market map should be returned.
GRADIENT	(Optional) Defines gradient for background image.
HEIGHT	(Optional) The height of the image in pixels. Defaults to 600px.
HIGHLIGHTTYPE	Allows to select companies to be highlighted: - gainers - companies with the maximum value of the visualized parameter - losers - companies with the minimum value of the visualized parameter - none - no companies are highlighted

MIN_MAX_AREARATIO	Sets the ratio between the maximum and the minimum areas to be displayed. The default is 500 - it means that a company will not be displayed, if its market capitalization is 500 times less than that of the company with the maximum market capitalization.
SECTORVIEW	Defines whether to display data at the sector level, or at the company level.
SHOWFORM	Defines whether to display the parameters section.
TITLE	Defines the web view title.
WIDTH	(Optional) The width of the image in pixels. Defaults to 800px.

HTTP Sample Request -

[http://views.rkd.reuters.com/views/countryandsector/\[appID\]/marketmap.aspx](http://views.rkd.reuters.com/views/countryandsector/[appID]/marketmap.aspx)

The user will get a Web View similar to this:



47.5 Error Messaging

Errors that occur in response to a request for HTML are returned directly to the user as formatted HTML displays. Error responses allow the users to easily identify what the issue is.

Error messages are localized and displayed in the language set in the user preferences.

Examples:

ERROR - Object reference not set to an instance of an object.
 Source: search - default
 Time: 3/17/2010 4:39:11 PM
 Error Reference: 077c982ca2db4bc79f170b6eb41e2eca



✖ ERROR - Parameter "rics" is missing. Please check URL.
 Source: charts - default
 Time: 3/17/2010 4:41:48 PM
 Error Reference: 4e43b67bf3164c6885222d9138e5b6ab

✖ ERROR - Backend call for RIC(s) "YBM" failed: ITEM_UNKNOWN
 Source: quotelist - default
 Time: 3/17/2010 4:43:11 PM
 Error Reference: 99aadcfa9214b9da5674cb5c4c30e87

47.6 Support

If you cannot find the information you need in the TRKD API Developer's Guide or have questions, please contact our Online Solutions team directly at OnlineSolutions@thomsonreuters.com and a Thomson Reuters Knowledge Direct product specialist will assist you.

For non-technical questions or if you are interested in purchasing Thomson Reuters Knowledge Direct API, please contact your Thomson Reuters sales representative.

As the data feed consultants support 'new' clients only for the first 90 days of adoption, you can contact Thomson Reuters Help consultants. To contact Thomson Reuters, log into the Customer Zone, navigate to the Thomson Reuters Knowledge Direct API product page, and click Contact Us. Include as many details as possible.

47.7 Standard Time Zones

The table below lists all time zones (in alphabetical order) that can be specified when displaying financial data:

Time Zone	Display
Afghanistan Standard Time	(GMT+04:30) Kabul
Alaskan Standard Time	(GMT-09:00) Alaska
Arab Standard Time	(GMT+03:00) Kuwait, Riyadh
Arabian Standard Time	(GMT+04:00) Abu Dhabi, Muscat
Arabic Standard Time	(GMT+03:00) Baghdad
Atlantic Standard Time	(GMT-04:00) Atlantic Time (Canada)
AUS Central Standard Time	(GMT+09:30) Darwin
AUS Eastern Standard Time	(GMT+10:00) Canberra, Melbourne, Sydney
Azerbaijan Standard Time	(GMT +04:00) Baku
Azores Standard Time	(GMT-01:00) Azores
Canada Central Standard Time	(GMT-06:00) Saskatchewan
Cape Verde Standard Time	(GMT-01:00) Cape Verde Islands
Caucasus Standard Time	(GMT+04:00) Yerevan
Cen. Australia Standard Time	(GMT+09:30) Adelaide
Central America Standard Time	(GMT-06:00) Central America
Central Asia Standard Time	(GMT+06:00) Astana, Dhaka
Central Brazilian Standard Time	(GMT -04:00) Manaus
Central Europe Standard Time	(GMT+01:00) Belgrade, Bratislava, Budapest, Ljubljana, Prague



Central European Standard Time	(GMT+01:00) Sarajevo, Skopje, Warsaw, Zagreb
Central Pacific Standard Time	(GMT+11:00) Magadan, Solomon Islands, New Caledonia
Central Standard Time	(GMT-06:00) Central Time (US and Canada)
Central Standard Time	(Mexico) (GMT-06:00) Guadalajara, Mexico City, Monterrey
China Standard Time	(GMT+08:00) Beijing, Chongqing, Hong Kong SAR, Urumqi
Dateline Standard Time	(GMT-12:00) International Date Line West
E. Africa Standard Time	(GMT+03:00) Nairobi
E. Australia Standard Time	(GMT+10:00) Brisbane
E. Europe Standard Time	(GMT+02:00) Minsk
E. South America Standard Time	(GMT-03:00) Brasilia
Eastern Standard Time	(GMT-05:00) Eastern Time (US and Canada)
Egypt Standard Time	(GMT+02:00) Cairo
Ekaterinburg Standard Time	(GMT+05:00) Ekaterinburg
Fiji Standard Time	(GMT+12:00) Fiji Islands, Kamchatka, Marshall Islands
FLE Standard Time	(GMT+02:00) Helsinki, Kiev, Riga, Sofia, Tallinn, Vilnius
Georgian Standard Time	(GMT +04:00) Tblisi
GMT Standard Time	(GMT) Greenwich Mean Time : Dublin, Edinburgh, Lisbon, London
Greenland Standard Time	(GMT-03:00) Greenland
Greenwich Standard Time	(GMT) Casablanca, Monrovia
GTB Standard Time	(GMT+02:00) Athens, Bucharest, Istanbul
Hawaiian Standard Time	(GMT-10:00) Hawaii
India Standard Time	(GMT+05:30) Chennai, Kolkata, Mumbai, New Delhi
Iran Standard Time	(GMT+03:30) Tehran
Israel Standard Time	(GMT+02:00) Jerusalem
Korea Standard Time	(GMT+09:00) Seoul
Mid-Atlantic Standard Time	(GMT-02:00) Mid-Atlantic
Mountain Standard Time	(GMT-07:00) Mountain Time (US and Canada)
Mountain Standard Time (Mexico)	(GMT-07:00) Chihuahua, La Paz, Mazatlan
Myanmar Standard Time	(GMT+06:30) Yangon (Rangoon)
N. Central Asia Standard Time	(GMT+06:00) Almaty, Novosibirsk
Namibia Standard Time	(GMT +02:00) Windhoek
Nepal Standard Time	(GMT+05:45) Kathmandu
New Zealand Standard Time	(GMT+12:00) Auckland, Wellington
Newfoundland Standard Time	(GMT-03:30) Newfoundland and Labrador
North Asia East Standard Time	(GMT+08:00) Irkutsk, Ulaanbaatar
North Asia Standard Time	(GMT+07:00) Krasnoyarsk
Pacific SA Standard Time	(GMT-04:00) Santiago
Pacific Standard Time	(GMT-08:00) Pacific Time (US and Canada); Tijuana
Romance Standard Time	(GMT+01:00) Brussels, Copenhagen, Madrid, Paris
Russian Standard Time	(GMT+03:00) Moscow, St. Petersburg, Volgograd
SA Eastern Standard Time	(GMT-03:00) Buenos Aires, Georgetown
SA Pacific Standard Time	(GMT-05:00) Bogota, Lima, Quito
SA Western Standard Time	(GMT-04:00) Caracas, La Paz



Samoa Standard Time	(GMT-11:00) Midway Island, Samoa
SE Asia Standard Time	(GMT+07:00) Bangkok, Hanoi, Jakarta
Singapore Standard Time	(GMT+08:00) Kuala Lumpur, Singapore
South Africa Standard Time	(GMT+02:00) Harare, Pretoria
Sri Lanka Standard Time	(GMT+06:00) Sri Jayawardenepura
Taipei Standard Time	(GMT+08:00) Taipei
Tasmania Standard Time	(GMT+10:00) Hobart
Tokyo Standard Time	(GMT+09:00) Osaka, Sapporo, Tokyo
Tonga Standard Time	(GMT+13:00) Nuku'alofa
US Eastern Standard Time	(GMT-05:00) Indiana (East)
US Mountain Standard Time	(GMT-07:00) Arizona
Vladivostok Standard Time	(GMT+10:00) Vladivostok
W. Australia Standard Time	(GMT+08:00) Perth
W. Central Africa Standard Time	(GMT+01:00) West Central Africa
W. Europe Standard Time	(GMT+01:00) Amsterdam, Berlin, Bern, Rome, Stockholm, Vienna
West Asia Standard Time	(GMT+05:00) Islamabad, Karachi, Tashkent
West Pacific Standard Time	(GMT+10:00) Guam, Port Moresby
Yakutsk Standard Time	(GMT+09:00) Yakutsk

47.8 Chart Skins

The following tables provide parameters for 21 pre-configured chart skins:

Skin ID = "0"		Skin ID = "1"		Skin ID = "2"	
Parameter	Value	Parameter	Value	Parameter	Value
Width	500	Width	200	Width	200
Height	300	Height	150	Height	150
Style	line	Style	line	Style	line
Grid	true	Grid	true	Grid	true
AllDay	false	AllDay	false	AllDay	false
Period	daily	Period	hourly	Period	hourly
GridWidth	1	GridWidth	1	GridWidth	1
GridColor	200;200;200	GridColor	139;139;155	GridColor	139;139;155
GridStyle	dot	GridStyle	Dot	GridStyle	Dot
Font	1	Font	1	Font	1
TextColor	0;0;0	TextColor	50;50;50	TextColor	255;255;204
LabelFormat	symbol	LabelFormat	Symbol	LabelFormat	Name
BorderWidth	1	BorderWidth	1	BorderWidth	1
BorderColor	100;100;100	BorderColor	139;139;155	BorderColor	139;139;155
BorderStyle	dot	BorderStyle	Solid	BorderStyle	Solid
LineColor	0;0;153 207;47;10 105;105;105 237;157;38 201;99;167 93;171;56 138;86;44 155;128;168 14;156;151 173;153;61	LineColor	0;102;204 207;47;10 105;105;105 237;157;38 201;99;167 93;171;56 138;86;44 155;128;168 14;156;151 173;153;61	LineColor	255;153;0 207;47;10 105;105;105 237;157;38 201;99;167 93;171;56 138;86;44 155;128;168 14;156;151 173;153;61
LineSize	1	LineSize	0	LineSize	2
Vol	true	Vol	false	Vol	false
VolColor	0;51;255	Value	true	Value	true



VolSize	2	ValueColor	50;50;50	ValueColor	245;245;245
VollLineSize	1	ShowRange	true	ShowRange	true
Value	true	Legend	true	Legend	true
ValueColor	50;50;50	LegendStyle	short	LegendStyle	short
ShowRange	true	Frame	false	Frame	false
Legend	true	FillColor	204;225;255	FillColor	255;153;0
LegendStyle	short	DisplayLinks	true	DisplayLinks	true
Frame	false	BgStartColor	255;255;255	BgStartColor	0;0;100
FrameColor	0;0;0	BgEndColor	255;255;255	BgEndColor	0;0;50
FrameWidth	1	Gradient	true	Gradient	true
FrameStyle	solid	BgStyle	LargeGrid	BgStyle	LargeGrid
FillColor	0;51;0	GradientStyle	ForwardDiagonal	GradientStyle	ForwardDiagonal
DisplayLinks	true	ImgType	PNG	ImgType	PNG
BgStartColor	255;255;255				
BgEndColor	230;230;230				
Gradient	true				
BgStyle	largegrid				
GradientStyle	forwarddiagonal				
ImgType	PNG				

Skin ID = "3"		Skin ID = "4"		Skin ID = "5"	
Parameter	Value	Parameter	Value	Parameter	Value
Width	700	Width	500	Width	500
Height	400	Height	400	Height	400
Style	line	Style	ohlc	Style	line
Grid	true	Grid	true	Grid	true
AllDay	false	AllDay	false	AllDay	false
Period	hourly	Period	daily	Period	daily
GridWidth	1	GridWidth	1	GridWidth	1
GridColor	139;139;155	GridColor	139;139;155	GridColor	139;139;155
GridStyle	Dot	GridStyle	Dot	GridStyle	Dot
Font	1	Font	1	Font	1
TextColor	255;165;0	TextColor	0;0;0	TextColor	0;0;0
LabelFormat	Name	LabelFormat	Symbol	LabelFormat	Symbol
BorderWidth	1	BorderWidth	1	BorderWidth	1
BorderColor	139;139;155	BorderColor	139;139;155	BorderColor	139;139;155
BorderStyle	Solid	BorderStyle	Solid	BorderStyle	Solid
LineColor	255;153;0 207;47;10 105;105;105 237;157;38 201;99;167 93;171;56 138;86;44 155;128;168 14;156;151 173;153;61	LineColor	0;0;0 207;47;10 105;105;105 237;157;38 201;99;167 93;171;56 138;86;44 155;128;168 14;156;151 173;153;61	LineColor	255;0;0 207;47;10 105;105;105 237;157;38 201;99;167 93;171;56 138;86;44 155;128;168 14;156;151 173;153;61
LineSize	2	LineSize	0	LineSize	2
Vol	true	Vol	true	Vol	true
VolColor	0;51;255	VolColor	255;0;0	VolColor	255;255;255
VolSize	2	VolSize	2	VolSize	2
VollLineSize	5	VollLineSize	0	VollLineSize	0
Value	true	Value	true	Value	true



ValueColor	245;245;245	ValueColor	0;0;0	ValueColor	255;255;255
ShowRange	true	ShowRange	true	ShowRange	true
Legend	true	Legend	true	Legend	true
LegendStyle	short	LegendStyle	short	LegendStyle	short
Frame	false	Frame	false	Frame	false
FillColor	255;153;0	FillColor	0;0;0	FillColor	0;0;0
DisplayLinks	true	DisplayLinks	true	DisplayLinks	true
BgStartColor	0;0;100	BgStartColor	204;255;255	BgStartColor	255;255;255
BgEndColor	0;0;50	BgEndColor	255;255;255	BgEndColor	51;0;153
Gradient	true	Gradient	true	Gradient	true
BgStyle	LargeGrid	BgStyle	ZigZag	BgStyle	LargeGrid
GradientStyle	ForwardDiagonal	GradientStyle	ForwardDiagonal	GradientStyle	Vertical
ImgType	PNG	ImgType	PNG	ImgType	PNG

Skin ID = "6"		Skin ID = "7"		Skin ID = "8"	
Parameter	Value	Parameter	Value	Parameter	Value
Width	500	Width	500	Width	500
Height	400	Height	400	Height	400
Style	ohlc	Style	line	Style	pctcng
Grid	true	Grid	true	Grid	true
AllDay	false	AllDay	false	AllDay	false
Period	daily	Period	daily	Period	daily
GridWidth	1	GridWidth	1	GridWidth	1
GridColor	139;139;155	GridColor	139;139;155	GridColor	139;139;155
GridStyle	Dot	GridStyle	Dot	GridStyle	Dot
Font	3	Font	1	Font	1
TextColor	255;255;255	TextColor	0;0;0	TextColor	0;0;0
LabelFormat	Name	LabelFormat	Symbol	LabelFormat	Symbol
BorderWidth	1	BorderWidth	1	BorderWidth	1
BorderColor	139;139;155	BorderColor	139;139;155	BorderColor	139;139;155
BorderStyle	Solid	BorderStyle	Solid	BorderStyle	Solid
LineColor	255;165;0 207;47;10 105;105;105 237;157;38 201;99;167 93;171;56 138;86;44 155;128;168 14;156;151 173;153;61	LineColor	255;0;0 207;47;10 105;105;105 237;157;38 201;99;167 93;171;56 138;86;44 155;128;168 14;156;151 173;153;61	LineColor	0;102;0 207;47;10 105;105;105 237;157;38 201;99;167 93;171;56 138;86;44 155;128;168 14;156;151 173;153;61
LineSize	2	LineSize	2	LineSize	1
Vol	true	Vol	true	Vol	true
VolColor	255;69;0	VolColor	51;0;153	VolColor	255;51;0
VolSize	2	VolSize	2	VolSize	2
VolLineSize	5	VolLineSize	0	VolLineSize	1
Value	true	Value	true	Value	true
ValueColor	255;255;255	ValueColor	0;0;0	ValueColor	0;51;0
ShowRange	true	ShowRange	true	ShowRange	true
Legend	true	Legend	true	Legend	true
LegendStyle	short	LegendStyle	short	LegendStyle	short
Frame	false	Frame	false	Frame	false
FillColor	0;0;0	FillColor	0;0;0	FillColor	0;0;0



DisplayLinks	true	DisplayLinks	true	DisplayLinks	true
BgStartColor	51;51;0	BgStartColor	255;255;255	BgStartColor	255;255;255
BgEndColor	0;102;0	BgEndColor	255;255;255	BgEndColor	255;255;255
Gradient	true	Gradient	true	Gradient	true
BgStyle	LightDownwardDiagonal	BgStyle	Horizontal	BgStyle	Horizontal
GradientStyle	ForwardDiagonal	GradientStyle	Horizontal	GradientStyle	Horizontal
ImgType	PNG	ImgType	PNG	ImgType	PNG

Skin ID = "9"		Skin ID = "10"		Skin ID = "11"	
Parameter	Value	Parameter	Value	Parameter	Value
Width	500	Width	500	Width	500
Height	400	Height	400	Height	400
Style	pctcng	Style	pctcng	Style	line
Grid	true	Grid	true	Grid	true
AllDay	false	AllDay	false	AllDay	false
Period	daily	Period	daily	Period	daily
GridWidth	1	GridWidth	1	GridWidth	1
GridColor	139;139;155	GridColor	139;139;155	GridColor	139;139;155
GridStyle	Dot	GridStyle	Dot	GridStyle	Dot
Font	1	Font	1	Font	1
TextColor	255;255;255	TextColor	0;0;0	TextColor	0;0;0
LabelFormat	Name	LabelFormat	Symbol	LabelFormat	Symbol
BorderWidth	1	BorderWidth	1	BorderWidth	1
BorderColor	139;139;155	BorderColor	139;139;155	BorderColor	139;139;155
BorderStyle	Solid	BorderStyle	Solid	BorderStyle	Solid
LineColor	51;102;204 207;47;10 105;105;105 237;157;38 201;99;167 93;171;56 138;86;44 155;128;168 14;156;151 173;153;61	LineColor	255;0;0 207;47;10 105;105;105 237;157;38 201;99;167 93;171;56 138;86;44 155;128;168 14;156;151 173;153;61	LineColor	0;255;0 207;47;10 105;105;105 237;157;38 201;99;167 93;171;56 138;86;44 155;128;168 14;156;151 173;153;61
LineSize	1	LineSize	2	LineSize	2
Vol	true	Vol	true	Vol	true
VolColor	255;0;0	VolColor	51;0;153	VolColor	255;0;0
VolSize	3	VolSize	2	VolSize	2
VolLineSize	1	VolLineSize	2	VolLineSize	2
Value	true	Value	true	Value	true
ValueColor	255;255;255	ValueColor	0;0;0	ValueColor	192;192;192
ShowRange	true	ShowRange	true	ShowRange	true
Legend	true	Legend	true	Legend	true
LegendStyle	short	LegendStyle	short	LegendStyle	short
Frame	false	Frame	false	Frame	false
FillColor	0;0;0	FillColor	0;0;0	FillColor	0;0;0
DisplayLinks	true	DisplayLinks	true	DisplayLinks	true
BgStartColor	0;0;0	BgStartColor	255;255;255	BgStartColor	255;255;255
BgEndColor	255;255;255	BgEndColor	204;255;255	BgEndColor	0;0;0
Gradient	true	Gradient	true	Gradient	true
BgStyle	Horizontal	BgStyle	Horizontal	BgStyle	Horizontal
GradientStyle	Horizontal	GradientStyle	ForwardDiagonalCycle	GradientStyle	Vertical



ImgType	PNG	ImgType	PNG	ImgType	PNG

Skin ID = "12"		Skin ID = "13"		Skin ID = "14"	
Parameter	Value	Parameter	Value	Parameter	Value
Width	500	Width	500	Width	500
Height	400	Height	400	Height	400
Style	pctcng	Style	pctcng	Style	candle
Grid	true	Grid	true	Grid	true
AllDay	false	AllDay	false	AllDay	false
Period	daily	Period	daily	Period	daily
GridWidth	1	GridWidth	1	GridWidth	1
GridColor	139;139;155	GridColor	139;139;155	GridColor	139;139;155
GridStyle	Dot	GridStyle	Dot	GridStyle	Dot
Font	1	Font	1	Font	1
TextColor	0;0;0	TextColor	245;245;245	TextColor	0;0;128
LabelFormat	Symbol	LabelFormat	Symbol	LabelFormat	Name
BorderWidth	1	BorderWidth	1	BorderWidth	1
BorderColor	139;139;155	BorderColor	139;139;155	BorderColor	139;139;155
BorderStyle	Solid	BorderStyle	Solid	BorderStyle	Solid
LineColor	0;102;0 207;47;10 105;105;105 237;157;38 201;99;167 93;171;56 138;86;44 155;128;168 14;156;151 173;153;61	LineColor	255;0;0 207;47;10 105;105;105 237;157;38 201;99;167 93;171;56 138;86;44 155;128;168 14;156;151 173;153;61	LineColor	0;0;255 207;47;10 105;105;105 237;157;38 201;99;167 93;171;56 138;86;44 155;128;168 14;156;151 173;153;61
LineSize	1	LineSize	0	LineSize	0
Vol	true	Vol	false	Vol	true
VolColor	255;51;0	Value	true	VolColor	0;153;255
VolSize	2	ValueColor	245;245;245	VolSize	2
VollineSize	1	ShowRange	true	VollineSize	1
Value	true	Legend	true	Value	true
ValueColor	0;51;0	LegendStyle	short	ValueColor	0;0;0
ShowRange	true	Frame	false	ShowRange	true
Legend	true	FillColor	0;0;0	Legend	true
LegendStyle	short	DisplayLinks	true	LegendStyle	short
Frame	false	BgStartColor	0;0;0	Frame	false
FillColor	0;0;0	BgEndColor	255;255;255	FillColor	0;0;0
DisplayLinks	true	Gradient	true	DisplayLinks	true
BgStartColor	255;255;255	BgStyle	LargeGrid	BgStartColor	255;255;255
BgEndColor	255;255;255	GradientStyle	HorizontalCycle	BgEndColor	255;255;255
Gradient	true	ImgType	PNG	Gradient	true
BgStyle	Horizontal			BgStyle	LargeGrid
GradientStyle	Horizontal			GradientStyle	ForwardDiagonal
ImgType	PNG			ImgType	PNG

Skin ID = "15"		Skin ID = "16"		Skin ID = "17"	
Parameter	Value	Parameter	Value	Parameter	Value
Width	500	Width	500	Width	600



Height	400	Height	400	Height	600
Style	ohlc	Style	line	Style	line
Grid	true	Grid	true	Grid	true
AllDay	false	AllDay	false	AllDay	false
Period	daily	Period	daily	Period	daily
GridWidth	1	GridWidth	1	GridWidth	1
GridColor	139;139;155	GridColor	139;139;155	GridColor	139;139;155
GridStyle	Dot	GridStyle	Dot	GridStyle	Dot
Font	1	Font	1	Font	1
TextColor	255;99;71	TextColor	0;128;0	TextColor	0;0;0
LabelFormat	Name	LabelFormat	Symbol	LabelFormat	Symbol
BorderWidth	1	BorderWidth	1	BorderWidth	1
BorderColor	139;139;155	BorderColor	139;139;155	BorderColor	139;139;155
BorderStyle	Solid	BorderStyle	Solid	BorderStyle	Solid
LineColor	255;0;0 207;47;10 105;105;105 237;157;38 201;99;167 93;171;56 138;86;44 155;128;168 14;156;151 173;153;61	LineColor	0;0;255 207;47;10 105;105;105 237;157;38 201;99;167 93;171;56 138;86;44 155;128;168 14;156;151 173;153;61	LineColor	255;0;0 207;47;10 105;105;105 237;157;38 201;99;167 93;171;56 138;86;44 155;128;168 14;156;151 173;153;61
LineSize	0	LineSize	2	LineSize	2
Vol	true	Vol	false	Vol	true
VolColor	255;0;0	Value	true	VolColor	51;0;153
VolSize	2	ValueColor	0;0;0	VolSize	1
VolLineSize	2	ShowRange	true	VolLineSize	2
Value	true	Legend	true	Value	true
ValueColor	255;255;255	LegendStyle	short	ValueColor	0;0;0
ShowRange	true	Frame	false	ShowRange	true
Legend	true	FillColor	0;0;0	Legend	true
LegendStyle	short	DisplayLinks	true	LegendStyle	short
Frame	false	BgStartColor	255;204;255	Frame	false
FillColor	0;0;0	BgEndColor	255;255;255	FillColor	0;0;0
DisplayLinks	true	Gradient	true	DisplayLinks	true
BgStartColor	60;0;0	BgStyle	LargeGrid	BgStartColor	255;255;255
BgEndColor	40;0;0	GradientStyle	Vertical	BgEndColor	255;255;255
Gradient	true	ImgType	PNG	Gradient	true
BgStyle	SolidDiamond			BgStyle	Horizontal
GradientStyle	ForwardDiagonal			GradientStyle	Horizontal
ImgType	PNG			ImgType	PNG

Skin ID = "18"

Parameter	Value
Width	600
Height	600
Style	pctcng
Grid	true
AllDay	false
Period	daily
GridWidth	1
GridColor	139;139;155
GridStyle	Dot

Skin ID = "19"

Parameter	Value
Width	300
Height	200

Skin ID = "20"

Parameter	Value
Font	9
Width	300
Height	142

Skin ID = "21"

Parameter	Value
Width	800
Height	600
Style	line
Grid	true
AllDay	true
Period	hourly
GridWidth	1
GridColor	221;221;221
GridStyle	Solid



Font	1	GridWidth	1	Font	1
TextColor	245;245;245	GridColor	207;207;207	TextColor	100;100;100
LabelFormat	Symbol	GridStyle	Solid	LabelFormat	Symbol
BorderWidth	1	TextColor	255;255;255	BorderWidth	2
BorderColor	139;139;155	FontSizeTitle	12	BorderColor	221;221;221
BorderStyle	Solid	Legend	false	BorderStyle	Solid
LineColor	255;0;0 237;157;38 155;128;168 105;105;105 201;99;167 93;171;56 138;86;44 207;47;10 14;156;151 173;153;61	LegendStyle	minimum	LineColor	52;111;153 204;0;1 69;140;96 253;181;21 105;105;105 237;157;38 201;99;167 93;171;56 138;86;44 155;128;168 14;156;151 173;153;61
LineSize	1	Titles	currency	LineSize	2
Vol	false	ShowTitle	false	Vol	true
ValueColor	245;245;245	ShowRange	false	VolColor	52;111;153
ShowRange	true	LegendPosition	overlaid	VolSize	2
Legend	true	ShowXAxis	true	VollineSize	2
LegendStyle	short	VolSize	5	ValueColor	99;101;99
Frame	false	ShowYAxis	true	ShowTitle	false
DisplayLinks	true	BgStartColor	255;255;255	ShowRange	false
BgStartColor	0;0;0	BgEndColor	255;255;255	Legend	false
BgEndColor	64;64;64	BgStyle	backwarddiagonal	LegendStyle	minimum
Gradient	true	GradientStyle	backwarddiagonal	Frame	false
BgStyle	Horizontal	BorderWidth	1	DisplayLinks	true
GradientStyle	VerticalCycle	BorderColor	207;207;207	BgStartColor	255;255;255
ImgType	PNG	BorderStyle	Solid	BgEndColor	255;255;255
		FontSizeLegend	8	Gradient	false
		FontSizeXMaj	8	BgStyle	LargeGrid
		or		GradientStyle	ForwardDiagonal
		FontSizeXMin	8		
		or		ImgType	PNG
		FontSizeYMaj	8		
		or			
		FontSizeYMin	8		
		or			
		FontSizeYTitle	8		
		LineColor	255;153;0		
		LineSize	2		
		Vol	false		



chapter 48 Troubleshooting and Debugging Your Application

In the case where you get SOAP faults which signify an error or a malformed request you can use the following information provided in the SOAP fault to determine the problem:

- **Subcode:** Subcode will give you the error value.
- **Reason:** A brief description of the error.
- **MessageID:** Each request has a MessageID which can be used by Thomson Reuters Support to see the original message .
- **ClientErrorReference:** Is a unique error ID logged by Thomson Reuters with additional debugging information.

With the information above you can either find the problem yourself or contact Support and pass this information to them for further details and help. For information on contacting Support see section Contacting Support.

48.1 Interpreting SOAP Faults

TRKD API uses standard SOAP faults to signal errors. You can use the fault Subcode and Reason to interpret the fault.

In the following example, the Subcode "Security_UserNotEntitledForApp" indicates that the user is not properly entitled. This fault also provides additional Reason description.

XML Sample Request - SOAP Fault Example

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://www.reuters.com/api/TokenManagement/TokenManagement.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1/
CreateImpersonationToken_1</Action>
    <Authorization xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">
      <ApplicationID>[AppID]</ApplicationID>
      <Token>[Impersonation Token]</Token>
    </Authorization>
  </Header>
  <Body>
    <CreateImpersonationToken_Request_1 xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1">
      <EffectiveUsername>test@reuters.com</EffectiveUsername>
    </CreateImpersonationToken_Request_1>
  </Body>
</Envelope>
```

XML Sample Response - SOAP Fault Example

```
<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" s:mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/
rkd/Faults_1/Fault_1_Reply</a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <s:Fault>
      <s:Code>
        <s:Value>s:Receiver</s:Value>
      </s:Code>
    </s:Fault>
  </s:Body>
</s:Envelope>
```



```

    <s:Subcode>
      <s:Value>a:Security_UserNotEntitledForApp</s:Value>
    </s:Subcode>
  </s:Code>
  <s:Reason>
    <s:Text xml:lang="en-US">User 'foo@reuters.com' is not entitled to make requests on behalf of application id '[AppID]'</s:Text>
  </s:Reason>
  <s:Detail>
    <ClientErrorReference xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Faults_1">
      <Timestamp>2007-03-23T21:39:24.443546Z</Timestamp>
      <ErrorReference>ec65919e4e9840339a7b467b253a7139</ErrorReference>
      <ServerReference>C9D8A58A87FA58B773944E3AE6F44C39630272FDC4D74032</ServerReference>
    </ClientErrorReference>
  </s:Detail>
</s:Fault>
</Body>
</Envelope>

```

48.2 The ClientErrorReference

Each TRKD SOAP fault contains a ClientErrorReference. Thomson Reuters logs each ErrorReference along with additional debugging information accessible by Thomson Reuters support staff. If you are unable to debug the problem based on the fault Subcode, contact Thomson Reuters support and include the ErrorReference. For additional information, see section Contacting Support.

The following example shows a SOAP fault with the unique ErrorReference id that can be used by Thomson Reuters support to retrieve further information on error.

XML Sample Response - SOAP Fault Example

```

<s:Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action xmlns="http://www.w3.org/2005/08/addressing" s:mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/rkd/Faults_1/Fault_1_Reply</a:Action>
    <a:RelatesTo xmlns="http://www.w3.org/2005/08/addressing">[MessageID]</a:RelatesTo>
  </s:Header>
  <s:Body>
    <s:Fault>
      <s:Code>
        <s:Value>s:Receiver</s:Value>
        <s:Subcode>
          <s:Value>a:Security_UserNotEntitledForApp</s:Value>
        </s:Subcode>
      </s:Code>
      <s:Reason>
        <s:Text xml:lang="en-US">User 'foo@reuters.com' is not entitled to make requests on behalf of application id 'REUTERSDEV'</s:Text>
      </s:Reason>
      <s:Detail>
        <ClientErrorReference xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Faults_1">
          <Timestamp>2007-03-23T21:39:24.443546Z</Timestamp>
          <ErrorReference>ec65919e4e9840339a7b467b253a7139</ErrorReference>
          <ServerReference>C9D8A58A87FA58B773944E3AE6F44C39630272FDC4D74032</ServerReference>
        </ClientErrorReference>
      </s:Detail>
    </s:Fault>
  </s:Body>
</Envelope>

```



48.3 Using MessageID

To help debug any problems that occur, your application should include a unique message identifier in the SOAP header of each request to the TRKD API. For example:

XML Sample Request - Using MessageID

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/rkd/SignificantDevelopments/SignificantDevelopments.svc</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
  ...
</Envelope>
```

TRKD logs each message ID. TRKD also returns the message ID in the SOAP header of the response. For example:

XML Sample Response - Using MessageID

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.reuters.com/ns/2006/05/01/webservices/rkd/SignificantDevelopments_1/GetSignificantDevelopments_1Response</a:Action>
    <a:RelatesTo>[Unique Message ID]</a:RelatesTo>
  ...
</s:Envelope>
```

Your application should log the message ID. When you contact Thomson Reuters for support (see section [Contacting Support](#)), include the message ID in your problem description, along with:

- Your application identification string
- Your service user
- Your effective user
- The ClientErrorReference
- The SOAP request and response

48.4 Using Request Examples from Developer's Guide in the API Console

When using request examples from Developer's Guide in the API Console you do not need to include SOAP header into the request body, use the body itself.

See an example of how it works with Create Service Token Request:

Example in Developer's Guide:

XML Sample Request

```
<Envelope xmlns="http://www.w3.org/2003/05/soap-envelope">
  <Header>
    <To xmlns="http://www.w3.org/2005/08/addressing">https://api.rkd.reuters.com/api/TokenManagement/TokenManagement.svc/Anonymous</To>
    <MessageID xmlns="http://www.w3.org/2005/08/addressing">[Unique Message ID]</MessageID>
    <Action xmlns="http://www.w3.org/2005/08/addressing">http://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1/CreateServiceToken_1</Action>
  </Header>
  <Body>
    <CreateServiceToken_Request_1 xmlns:global="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1" xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1">
      <ApplicationID xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">[AppID]</ApplicationID>
      <Username>[service user]</Username>
      <Password>[password]</Password>
    </CreateServiceToken_Request_1>
  </Body>
</Envelope>
```




```
</CreateServiceToken_Request_1>
</Body>
</Envelope>
```

To make this request in the API Console, you have to use **ONLY** the body of this request:

XML Sample Request

```
<CreateServiceToken_Request_1 xmlns:global="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1" xmlns="http://
www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1">
  <ApplicationID xmlns="http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1">[AppID]</ApplicationID>
  <Username>[service user]</Username>
  <Password>[password]</Password>
</CreateServiceToken_Request_1>
```

48.5 Contacting Support

If you are unable to debug your application, you can contact Thomson Reuters for help. To contact Thomson Reuters, log into the Customer Zone, navigate to the Thomson Reuters Knowledge Direct product page, and click Contact Us. Include as many details as possible. You must include:

- Your application identification string (AppID) (see section Understanding Application Identification Strings (appids))
- Your service user (see section Understanding Service Users, Impersonation (Effective Users))
- Your effective user (see section Understanding Service Users, Impersonation (Effective Users))
- The Unique Message ID (see section Using MessageID)
- The ClientErrorReference included in the SOAP fault (see section ClientErrorReference)
- The SOAP request and response

The Contact Us form generates a Thomson Reuters Service Request (SR), which guarantees prompt service and tracking from the Thomson Reuters Support Center.



chapter 49 Coding Examples

The Thomson Reuters Knowledge Direct (TRKD) API does not require you to code using any particular technology platform or coding style.

Code samples demonstrate best practices for the basic manipulation of TRKD API services.

They are implemented using different technologies and platforms and could be downloaded from the Customer Zone, <https://customers.reuters.com>.

Log in and navigate to the Thomson Reuters Knowledge Direct API page.

In the Technical Documents section you can find the links to archives with sample code for .NET, Sun Java, IBM Java, PHP, Perl and Ruby.

The following section contains guidelines on driving the .NET code samples and best-practices example snippets using C# and proxy classes generated by Microsoft's svcutil.

49.1 Prerequisites

To run the examples in this chapter and the client code samples, you need the following:

- **Microsoft Visual Studio**

- **Windows Communication Foundation (WCF)**

TRKD API web services rely on the WS-* standards. To properly manage these standards, you must be running the Microsoft Windows Communication Foundation (WCF) included as part of .NET Framework 3.0 or later.

- **ServiceModel Metadata Utility Tool (svcutil)**

To generate proper proxy classes, you must use Microsoft's ServiceModel Metadata Utility Tool (svcutil). Svcutil is part of the Windows SDK 6.0 and later.

The link to SDK v7.0: <http://www.microsoft.com/en-us/download/details.aspx?id=8279>

After installation of Windows SDK, svcutil is located in C:\Program Files\MicrosoftSDKs\Windows\[version of SDK]\Bin.

49.2 Working with the Client Code Samples

Each .NET code sample is either a console application or a web application. You can build and run it in your own development environment.

49.2.1 Installing a Code Sample

To install a code sample, simply download and unzip the sample into a working directory in your development environment.

49.2.2 Building a Code Sample

To build the code sample, load it in Microsoft Visual Studio by double-clicking the corresponding solution file and build it like any other solution, with Build -> Build Solution (or F6).

49.2.3 Running a Code Sample

You can run a client sample in Debug mode within Visual Studio like any other solution, with Debug -> Start Debugging.

You can also run the client sample (outside of the debugger) by double-clicking the executable file.



49.3 Creating Your Own Client Application

This section provides the information on how to build your own client application.

49.3.1 Using Generated Proxy Classes

Each TRKD service publishes its metadata using a WSDL document. This WSDL can be used by appropriate tools to generate proxy classes which are able to communicate with TRKD services.

49.3.1.1 Downloading XSDs and WSDLs

To generate client proxy classes, you must have an instance of all required XSD and WSDL documents locally. You can download these documents for the TRKD API servers. To keep your code as simple as possible, Thomson Reuters recommends only downloading XSDs and WSDLs for the services your application requires. For example, do not download and generate proxies from `News_1_HttpAndRKDToken.wsdl` if your application only displays Earning Estimates.

All TRKD API client applications require `TokenManagement_1`, so you will always need:

- `http://api.rkd.reuters.com/schemas/TokenManagement/TokenManagement_1.xsd`
- `http://api.rkd.reuters.com/schemas/TokenManagement/wsdl/TokenManagement_1_HttpsAndAnonymous.wsdl`

as well as the shared

- `http://api.rkd.reuters.com/schemas/Cache_1.xsd`
- `http://api.rkd.reuters.com/schemas/Common_1.xsd`
- `http://api.rkd.reuters.com/schemas/Faults_1.xsd`

In addition, download the XSD(s) and WSDL(s) for the services your application will use. For example, Times Series requires:

- `http://api.rkd.reuters.com/schemas/TimeSeries/TimeSeries_1.xsd`
- `http://api.rkd.reuters.com/schemas/TimeSeries/wsdl/TimeSeries_1_HttpAndRKDToken.wsdl`

49.3.2 Generating Proxy Classes

Use Microsoft's ServiceModel Metadata Utility Tool (`svcutil`) to generate proxy classes (see section Prerequisites).

You can either use script file or command line to run the generating process. Sample scripts could be found in the code samples. In case of running `svcutil` from the command line you should use the following command:

```
svcutil <local_folder>\*.xsd <local_folder>\*.wsdl /out:<output file name>
```

where `<local_folder>` is the folder where the necessary XSD and WSDL documents are stored.

This command generates proxy classes and `output.config` files you can include in your Visual Studio project. The configuration parameters from `output.config` file should be added to the application configuration file.

In addition, you can simplify your code by using `svcutil` to map XML namespace to CLR namespaces. For example:

```
svcutil <local_folder>\*.xsd <local_folder>\*.wsdl /out:TrkdProxyClasses.cs /n:*,ThomsonReutersKnowledgeDirect
/n:http://www.reuters.com/ns/2006/05/01/webservices/rkd/Faults_1,ThomsonReutersKnowledgeDirect.Faults_1
/n:http://schemas.microsoft.com/2003/10/Serialization/,ThomsonReutersKnowledgeDirect.Serialization
/n:http://www.reuters.com/ns/2006/05/01/webservices/rkd/Common_1,ThomsonReutersKnowledgeDirect.Common_1
/n:http://www.reuters.com/ns/2008/03/01/webservices/rkd/Cache_1,ThomsonReutersKnowledgeDirect.Cache_1
/n:http://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1/HttpsAndAnonymous,
ThomsonReutersKnowledgeDirect.TokenManagement_1.HttpsAndAnonymous
/n:http://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1,ThomsonReutersKnowledgeDirect.
TokenManagement_1
```

Note: You must download the schemas which are included by reference in the schemas for the individual methods (for example `TokenManagement_1.xsd` includes `Common_1.xsd`) otherwise you might get the 'Cannot import wsdl:portType' error occurs when you try to generate proxy classes using `svcutil` utility without downloading all the schemas.



49.3.3 Creating a Service Token

Use `TokenManagement_1Client` to create a service token.

```
ITokenManagement_1 tokenManagementClient =
    new TokenManagement_1Client();
CreateServiceToken_Request_1 innerRequest =
    new CreateServiceToken_Request_1();
CreateServiceToken_1_RequestBody serviceTokenRequest =
    new CreateServiceToken_1_RequestBody();
innerRequest.ApplicationID = applicationID;
innerRequest.Username = serviceuser;
innerRequest.Password = password;
serviceTokenRequest.CreateServiceToken_Request_1 = innerRequest;
CreateServiceToken_1_ResponseMessage serviceTokenResponseMessage =
    tokenManagementClient.CreateServiceToken_1(serviceTokenRequest);
```

Use the token to populate the `AuthorizationType` object required for data requests:

```
authorization = new AuthorizationType();
authorization.ApplicationID = applicationID;
authorization.Token =
    serviceTokenResponseMessage.CreateServiceToken_Response_1.Token;
```

49.3.4 Caching Tokens and Handling Token Expiration

Since tokens are valid for 90 minutes, you should code your application to continue to use the token until it expires, rather than requesting a new token with each data request. When a token expires, TRKD API generates a `FaultException` with the message "Token expired." Use this as a signal to get a new token.

In addition, the message "Token is invalid" indicates an (unlikely) condition where the token is corrupted. In this case, your application should get a new token.

For example:

```
try
{
    return SendGetTimeSeriesRequest(tm.authorization, timeSeriesInnerRequest, timeSeriesClient);
}
catch (FaultException<ClientErrorReference> tsFault)
{
    // For an expired token or invalid token, create a new token and // try again.
    if ((tsFault.Message.Equals(TokenExpiredMessage))
        || (tsFault.Message.Equals(TokenInvalidMessage)))
    {
        tm.createServiceToken(appID, user, pass, true);
        return SendGetTimeSeriesRequest(tm.authorization, timeSeriesInnerRequest, timeSeriesClient);
    }
    else
    {
        throw;
    }
}
```

49.3.5 Using MessageID

To help debug any problems that occur, your application should include a unique message identifier in the SOAP header of each request to TRKD API. Your application should log the message ID.

For example:

```
using (new OperationContextScope(((TokenManagement_1Client)tokenManagementClient).InnerChannel))
{
    Guid msgId = Guid.NewGuid();
    OperationContext.Current.OutgoingMessageHeaders.MessageId =
        new UniqueId(msgId);
    DebugLog.addRecord("CreateServiceToken_Request_1",
        msgId.ToString(), DateTime.Now.ToString());
```



```
try
{
    CreateServiceToken_1_ResponseMessage serviceTokenResponseMessage =
    tokenManagementClient.CreateServiceToken_1(serviceTokenRequest);
}
```

When you contact Thomson Reuters for support, include the message ID in your problem description.

49.3.6 Handling Errors (Faults)

TRKD API services return errors to your application as SOAP faults. In most cases, you can use the fault message to trigger an appropriate message to the client or other appropriate handling.

Each TRKD API SOAP fault includes `ClientErrorReference`. Thomson Reuters logs each `ErrorReference` along with additional debugging information accessible by Thomson Reuters support staff.

As part of your error handling, your application should log the `ClientErrorReference` as well as the `MessageID` (which uniquely maps the response to the request).

For example:

```
catch (FaultException<ClientErrorReference> tmsFault)
{
    // Log the ClientReferenceID and MessageID
    ErrorLog.addRecord(tmsFault.Detail.ErrorReference,
    (string)tmsFault.Data[RelatesToHeader],
    tmsFault.Message, DateTime.Now.ToString());
    if (tmsFault.Message.Equals("Invalid user name or password."))
    {
        Console.WriteLine("Please enter a valid user name and password.");
    }
    else
    {
        // Unexpected error authenticating. Trigger some monitoring
        //alert and tell the client to try again later.
        Console.WriteLine("Please try again later. Message is: " + tmsFault.Message);
    }
}
```

When you contact Thomson Reuters for support, include the `ErrorReference` and message ID in your problem description.

49.3.7 Overriding Server Certificate Validation

In certain situations, you may find it helpful to override the server certificate validation procedure.

```
ServicePointManager.ServerCertificateValidationCallback =
new RemoteCertificateValidationCallback(true);
```

This code forces the client application to accept every certificate that the server provides. This method weakens the security of the application because the authentication of the server is bypassed. To safely work around this problem, make sure that the certificate of the server contains the expected name before you allow the connection to continue. For additional information, see <http://support.microsoft.com/default.aspx?scid=kb%3BEN-US%3B823177>.

49.3.8 Supporting Responses Larger than 65,536 Bytes

To guard against Denial of Service attacks, the `app.config` for proxy classes generated with Microsoft's `svcutil.exe` default to a limit of 65,536 bytes for response messages.

See <http://msdn2.microsoft.com/en-us/library/ms733135.aspx>.

Since many TRKD API services (for example, `Estimates_1`) can return more than 65,536 bytes, you must modify this default. For an TRKD API client, use the maximum value of 2 GB by setting `maxReceivedMessageSize="268435456"` in `app.config`.



49.3.9 Connecting to TRKD API Servers Being behind a Proxy

If you are behind a proxy and try to connect to TRKD API servers using the "app.config" file from the code samples provided by Thomson Reuters, keep in mind that your system may not be properly configured to use the auto-configured proxy. As a result, you may experience problems while connecting to our servers and get the following error:

```
"Creating new token...Failed to create new token. Reason: Could not connect to https://api.rkd.reuters.com/api/TokenManagement/TokenManagement.svc/Anonymous. TCP error code 10060: A connection attempt failed because the connected party did not properly respond after a period of time, or established connection failed because connected host has failed to respond 159.220.40.240:443"
```

To solve this problem, you have to modify app.config. Find the following line in the code:

```
useDefaultWebProxy="true"
```

and replace it with the following:

```
proxyAddress="[your.proxy.server]" useDefaultWebProxy="false"
```

49.4 Debugging Request/Response Problems

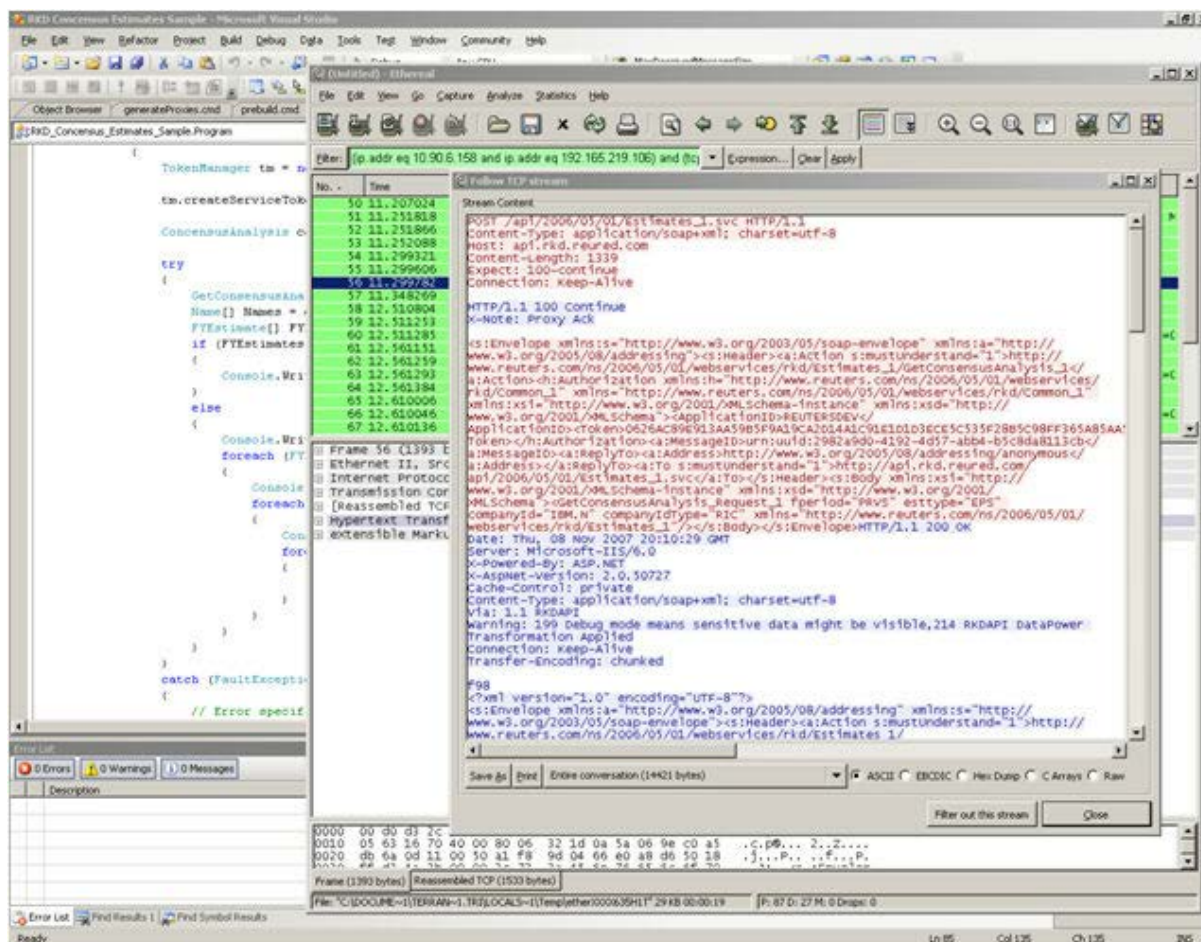
Integrated Development Environments (IDEs) like Visual Studio and generated proxy classes hide (intentionally) the details of the actual SOAP messages to and from web services. This abstraction generally speeds application development, but it can sometimes make it difficult to understand why particular requests are failing.

Also, since TRKD API does not require clients to use specific technologies, our Support team requires SOAP request and response examples to debug problems.

Seeing the actual SOAP requests and responses can also help you compare your application behavior to SOAP messages generated by the TRKD API support tools, Request Builder and API Console (to access the support tools, visit the Customer Zone, <https://customers.reuters.com>. Log in and navigate to the Thomson Reuters Knowledge Direct page, API delivery section).

You can use a protocol analyzer (commonly called a sniffer) to see the actual SOAP requests and responses your application is forming. For example, Ethereal (www.ethereal.com) is free protocol analyzer software, under the GNU General Public License.





chapter 50 Fiddler Examples for TRKD API Services

This chapter provides instructions on how to use Fiddler application in order to send requests to TRKD API. It also explains how to generate a new service token and resend a request.

50.1 Installing Fiddler

In order to use Fiddler application for making requests to Thomson Reuters Knowledge Direct API (TRKD API) you should install Fiddler2 v2.2.4.6 or higher. To download Fiddler:

1. Go to www.fiddler2.com web-site.
2. Click on the Get Fiddler! tab and click the Install Fiddler2 link to save the installation file to your computer.
3. Run the downloaded executable file (Fiddler2Setup.exe) to install Fiddler on your computer.

Note: Version 2 is written for .NET Framework 2.0 (and later) and allows viewing HTTPS traffic.

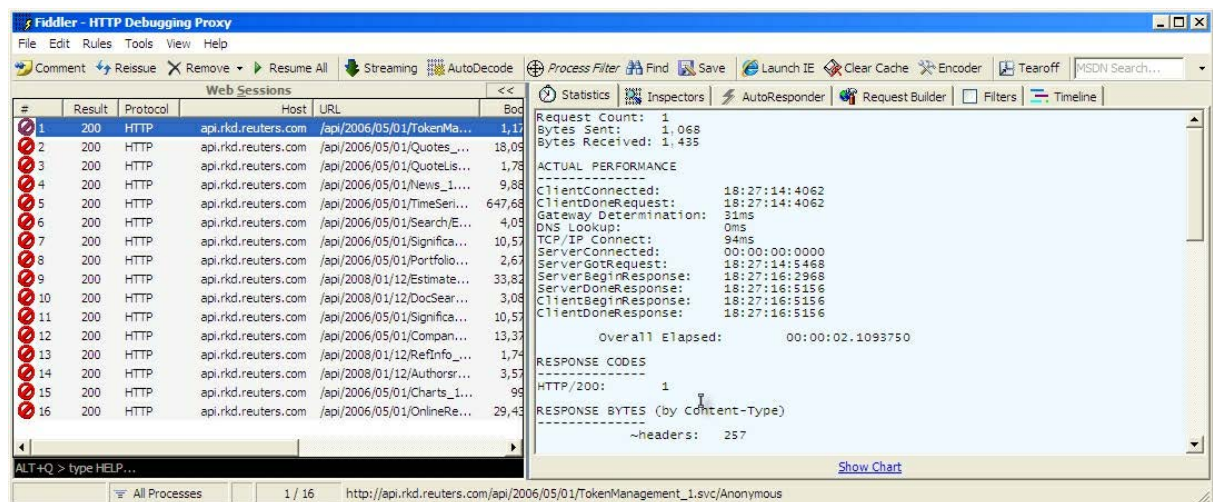
50.2 Loading .saz File

Load the .saz file with the TRKD API requests:

- Go to the location where the file was saved and double-click the file and Fiddler will automatically open it.

Or:

- Launch Fiddler2 and go to File> Load Archive. Then go to the directory where you saved the file, left-click it and press the Open button to load the .saz file to Fiddler:



Note: .saz file is in the zip package with User Guide, both of which can be downloaded from Customer Zone.

50.3 User Credentials

Please use the user credentials (ApplicationID, Username and Password) provided by Thomson Reuters to your organization. Please, be also advised that depending on the entitlements set for your user, some services requests provided in this sample

may not be available. For the purpose of this tutorial, the user credentials used for the TRKD API services requests in the sample are:

```
<ApplicationID>rkdapidemoapp</ApplicationID>
<Username>rkdapidemo@reuters.com</Username>
<Password>g9y5r48if</Password>
```

Note: Please keep in mind that the password for demo user changes frequently. Please contact your sales specialist for the current password.

50.4 Reissuing Requests

Fiddler allows the user to reissue requests multiple times. To reissue a request, do the following:

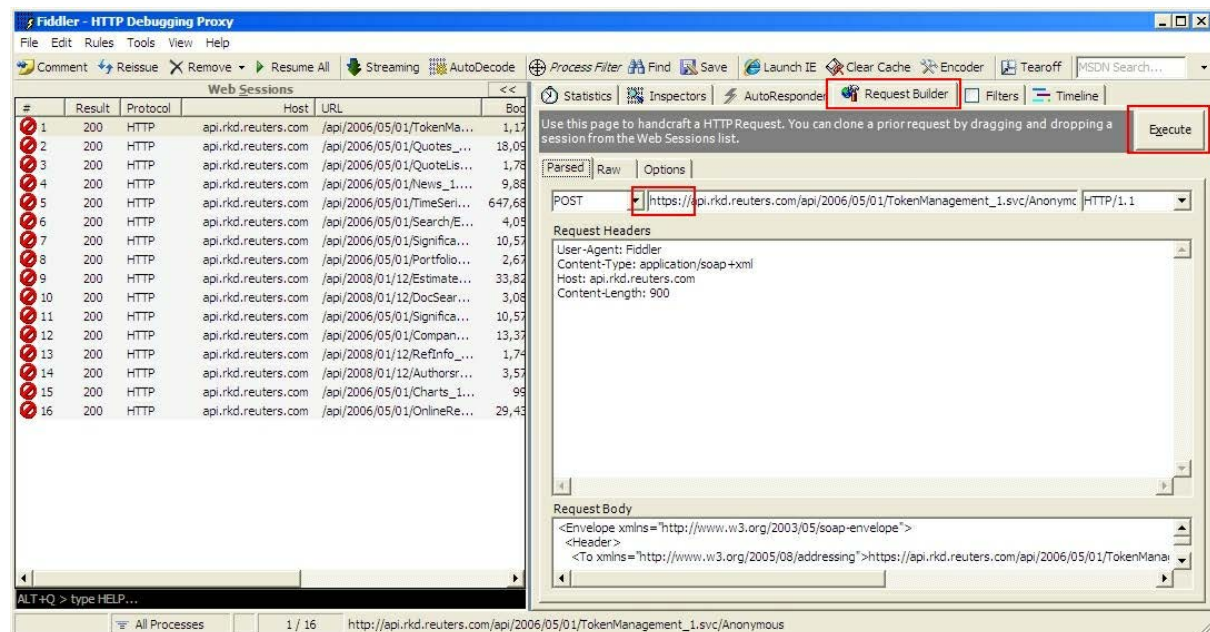
1. Open the RkdApiSampleRequests.saz file in Fiddler.
2. Right-click any request in the **Web Sessions** list and select **Replay> Reissue Requests**. Fiddler will make the selected request and display the results.

Note: Service token is available for 90 minutes and after that period the token expires. If you try to reissue any service request after the token has expired, TRKD API will return HTTP status 500 and error message "Token expired" in the response. To generate a new service token, you must make a new request to the Token Management service to obtain a fresh service token.

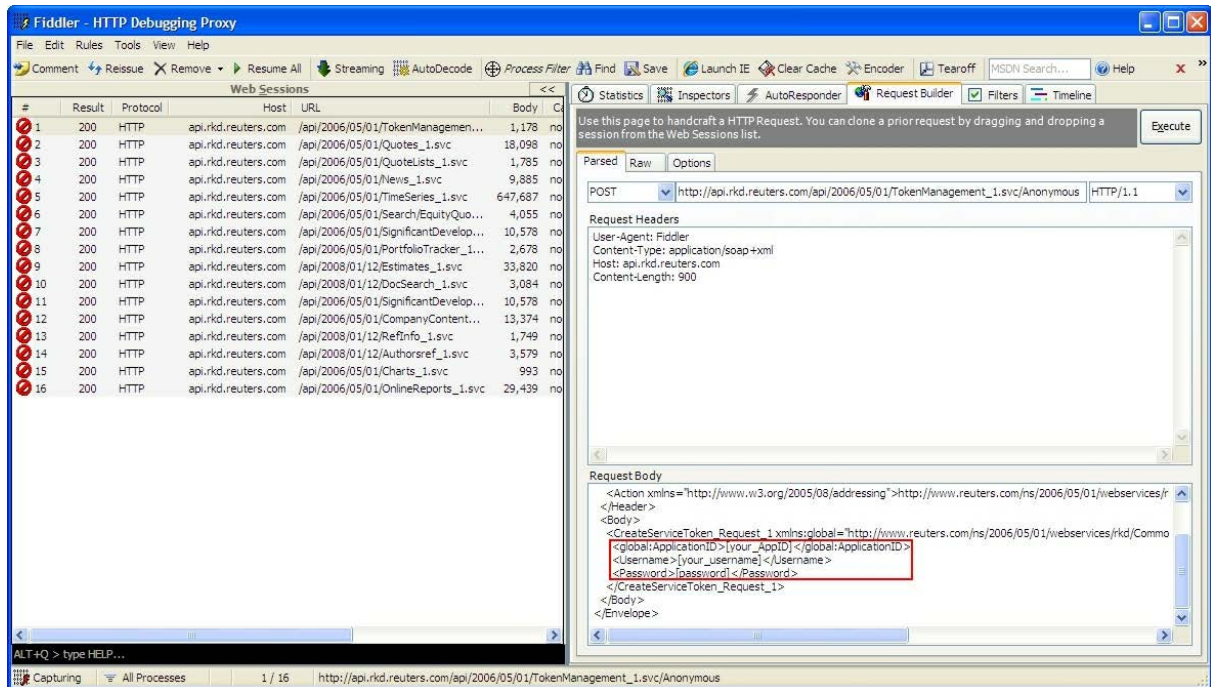
50.5 Generating a New Token

Use the following steps to resend the request to the Token Management service to generate a new token:

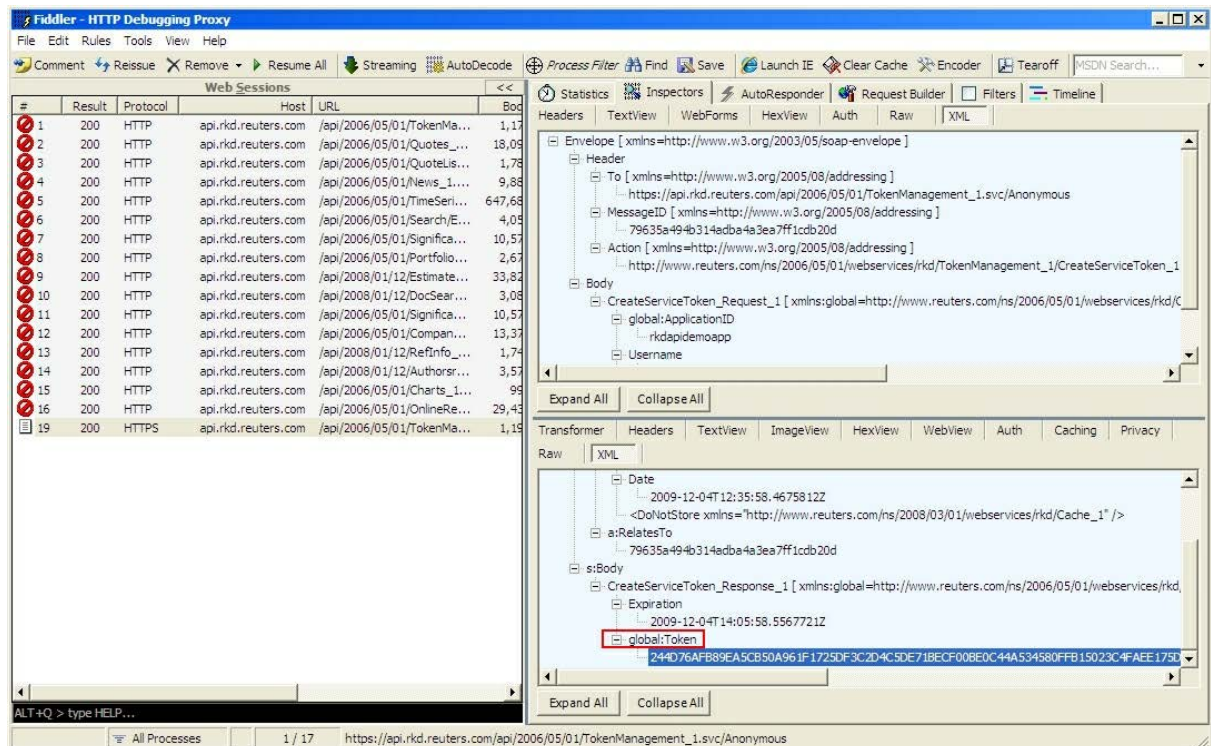
1. Click the Token Management service request in the **Web Sessions** list to select it and drag-and-drop it into the **Request Builder** tab.
2. Make sure the URL indicates the use of **HTTPS** and not **HTTP**:



3. In the request body, provide your own user credential values for ApplicationID, Username and Password:



4. Click the **Execute** button. The response will contain the newly generated token:

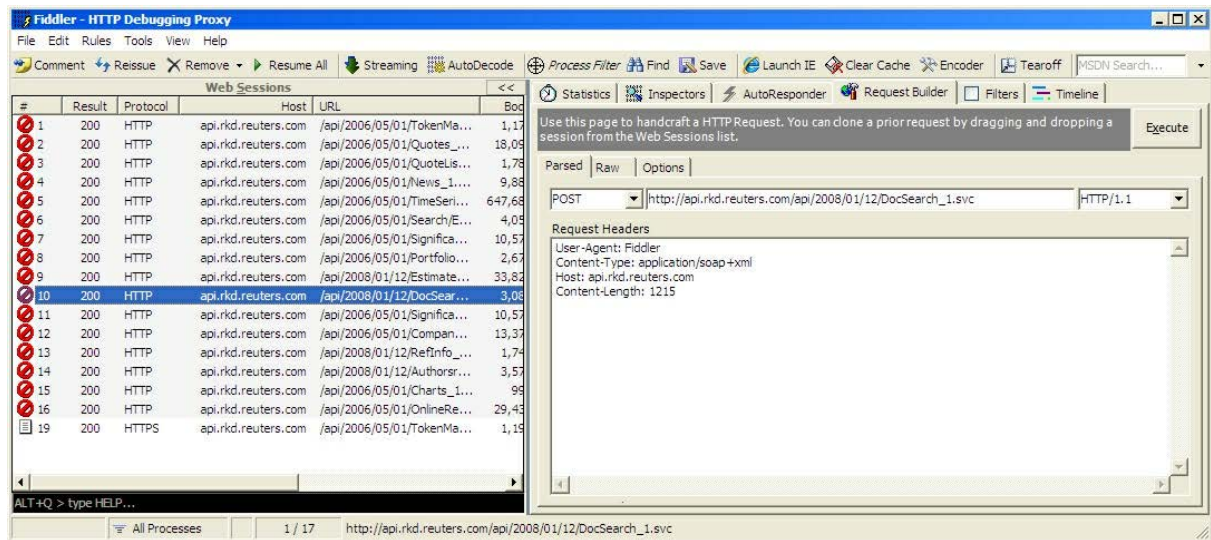


50.6 Resending Requests

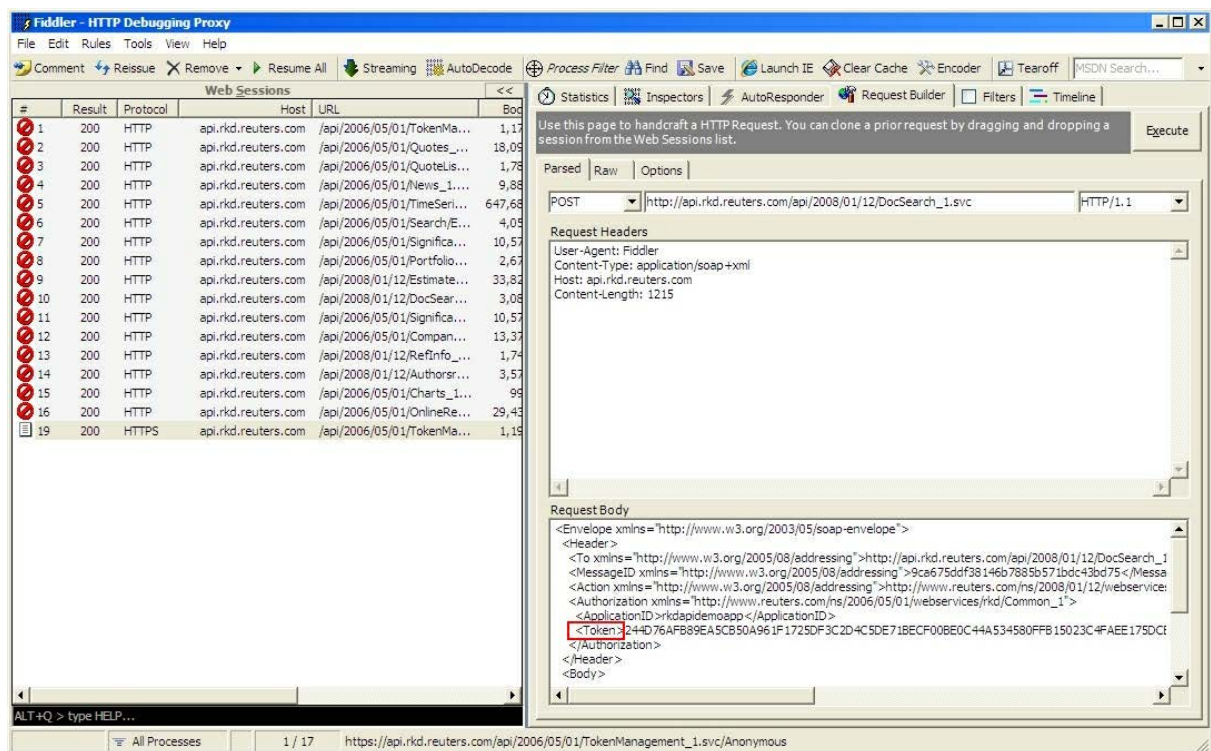
You would need to resend requests to TRKD API after your service token expires. Follow the steps below to resend a request:

1. Click the request you want to resend in the **Web Sessions** list to select it and drag-and-drop it to the **Request**

Builder tab:



2. In the **Request Body** section, replace the value of the old token with the new one:



3. Replace the value of the [ApplicationID] with the value assigned to your organization.
4. Click the **Execute** button to send the request.



chapter 51 Building Java TRKD Client

Each TRKD service publishes its metadata using WSDL. This WSDL can be used by appropriate tools to generate Java proxy classes which are able to communicate with TRKD services. This chapter describes how you can generate Java code for TRKD proxy classes using Sun Metro framework tools.

51.1 TRKD Metadata

For each service TRKD has XML schema which defines request/response XML types. These schemas may reference other schemas which reside at the same location.

Each TRKD service may contain several operations. Each operation may be exposed via several different bindings. In order to prevent name conflicts TRKD provides one WSDL file per service binding. I.e. a single WSDL contains service operations exposed via the same binding. In regard to this WSDL file names and target namespaces are appended with the binding name.

51.1.1 Naming Rules

Artifact	Rule
XML schema file name	Format: <ServiceName>_<ServiceVersion>.xsd Example: TokenManagement_1.xsd
XML schema target namespace	Format: http://www.reuters.com/ns/<DateStamp>/webservices/rkd/<ServiceName>_<ServiceVersion> Example: http://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1
WSDL file name	Format: <ServiceName>_<ServiceVersion>_<EndpointBinding>.wsdl Example: TokenManagement_1_HttpAndAnonymous.wsdl
WSDL target namespace	Format: http://www.reuters.com/ns/<DateStamp>/webservices/rkd/<ServiceName>_<ServiceVersion>/<EndpointBinding> Example: http://www.reuters.com/ns/2006/05/01/webservices/rkd/TokenManagement_1/HttpAndAnonymous

51.1.2 Supported Bindings

Name	Description
HttpsAndAnonymous	Transport HTTPS No authentication
HttpAndRKDToken	Transport HTTP TRKD token in SOAP header for authentication

51.1.3 Metadata Files Location

XML schemas are available at [http://<RKD_ServerName>/schemas/\[ServiceName\]](http://<RKD_ServerName>/schemas/[ServiceName]).

WSDLs are available at [http://<RKD_ServerName>/schemas/\[ServiceName\]/wsdl](http://<RKD_ServerName>/schemas/[ServiceName]/wsdl).

51.2 Prerequisites

This section lists the software you need to install.



51.2.1 Sun JDK

Please download and install Sun JDK version 1.5 or higher from the download page. After that please create environment system variable JAVA_HOME, set it to Sun JDK installation and add %JAVA_HOME%\bin to Path environment system variable.

51.2.2 Framework

You need to use Sun Metro framework:

Please download Sun Metro from the site - we recommend version 1.4 or higher and follow the installation instructions. After that please create environment system variable METRO_HOME, set it to Sun Metro installation and add %METRO_HOME%\bin to Path environment system variable.

Note: If you are using Sun JDK 1.6 up to Update Release 3 please copy webservices-api.jar to %JAVA_HOME%\jre\lib\endorsed from %METRO_HOME%\lib. It is necessary because Metro tools use JAX-WS which version is newer than the one bundled with JDK 1.6. Please ignore this note for Update Release 4 or later of Sun JDK 1.6. More details are available here.

51.2.3 Apache Ant

Please download Apache Ant 1.6.5 or higher from this site - and follow the installation instructions. After that please create environment system variable ANT_HOME, set it to Apache Ant installation directory and add %ANT_HOME%\bin to Path environment system variable.

51.2.4 Eclipse

We recommend downloading Eclipse Ganymede 3.4.0 or higher from the site and installing it according to the installation instructions.

51.3 Generating Java Proxy Code

This chapter provides detailed instructions on how to generate Java proxy code using Sun Metro framework tool.

51.3.1 Using Wsimport Utility Tool Ant Task from Sun Metro Framework

The Wsimport Utility Tool is a part of Sun Metro Framework and is used to generate generates JAX-WS portable artifacts from wsdl file. We recommend using Wsimport Ant task:

<https://metro.dev.java.net/nonav/1.3/docs/wsimportant.html>

51.3.1.1 TRKD Java Classes for TRKD Services

The following Ant script generates client code for a particular TRKD service (in this case for TokenManagement_1_HttpsAndAnonymous.wsdl) - please create build.xml file with the content as below:

XML Sample

```
<?xml version="1.0"?>
<project default="build" basedir=".">
  <record name="build.log" loglevel="verbose"/>
  <property environment="env"/>
  <path id="class.path">
    <fileset dir="${env.METRO_HOME}\lib\" includes="*.jar"/>
  </path>
  <target name="build">
    <taskdef name="wsimport" classname="com.sun.tools.ws.ant.WsImport" classpathref="class.path"/>
    <property name="wsdl" value="http://api.rkd.reuters.com/schemas/TokenManagement/wsdl/TokenManagement_1_HttpsAndAnonymous.wsdl"/>
    <wsimport wsdl="${wsdl}" sourcedestdir="src" xnocompile="true" extension="true" verbose="true">
```



```
<binding dir="${basedir}/etc" includes="*.xml" />
</wsimport>
</target>
</project>
```

This will generate corresponding Java files which you can include in your Eclipse project and use generated proxy class in your application.

Let's describe some things in the script:

<fileset dir="\${env.METRO_HOME}\lib\" includes="*.jar"/> - specifies to get Java library jar files from the location which is set in the environment variable METRO_HOME

<taskdef name="wsimport" classname="com.sun.tools.ws.ant.WsImport" classpathref="class.path"/> - specifies Java class where Wsimport Ant task is implemented.

<property name="wsdl" value="http://api.rkd.reuters.com/schemas/TokenManagement/wsdl/TokenManagement_1_HttpsAndAnonymous.wsdl"/> - specifies WSDL url.

```
<wsimport wsdl="${wsdl}" sourcedestdir="src" xnocompile="true" extension="true" verbose="true">
<binding dir="${basedir}/etc" includes="*.xml" />
</wsimport>
```

wsdl="\${wsdl}" - specifies WSDL url declared before.

sourcedestdir="src" - specifies the directory where generated Java classes will be put.

xnocompile="true" - specifies to not compile Java classes.

extension="true" - specifies to use extension for SOAP bindings (required for RKD services).

verbose="true" - specifies detailed level of messages produced by Ant task

<binding dir="\${basedir}/etc" includes="*.xml" /> - specifies the directory where binding files necessary for generating proper Java package names are located (please read the next subsection for details on these files)

51.3.1.2 Generating Proper Java Package Names

Generally, you can customize Java package names via Metro Web Service Stack WSDL Customization (documentation available [here](#)).

In case of external xsd files imported to wsdl use external JAXB-binding files in order to map namespaces to Java package names.

Example (imported-schemas.xml)

```
<?xml version="1.0" encoding="UTF-8"?>

<jaxb:bindings jaxb:version="2.0" xmlns:jaxb="http://java.sun.com/xml/ns/jaxb" xmlns:xs="http://www.w3.org/2001/XMLSchema">

<jaxb:bindings schemaLocation="http://api.rkd.reuters.com/schemas/TokenManagement/TokenManagement_1.xsd" node="/xs:schema">
<jaxb:schemaBindings>
<jaxb:package name="com.reuters.webservice.rkd.token"/>
</jaxb:schemaBindings>
</jaxb:bindings>

<jaxb:bindings schemaLocation="http://api.rkd.reuters.com/schemas/Faults_1.xsd" node="/xs:schema">
<jaxb:schemaBindings>
<jaxb:package name="com.reuters.webservice.rkd.exceptions"/>
</jaxb:schemaBindings>
</jaxb:bindings>

<jaxb:bindings schemaLocation="http://api.rkd.reuters.com/schemas/Serialization_200310.xsd" node="/xs:schema">
<jaxb:schemaBindings>
```



```

<jaxb:package name="com.microsoft.schemas.serialization"/>
</jaxb:schemaBindings>
</jaxb:bindings>

<jaxb:bindings schemaLocation="http://api.rkd.reuters.com/schemas/Cache_1.xsd" node="/xs:schema">
<jaxb:schemaBindings>
<jaxb:package name="com.reuters.webservice.rkd.cache"/>
</jaxb:schemaBindings>
</jaxb:bindings>

<jaxb:bindings schemaLocation="http://api.rkd.reuters.com/schemas/Common_1.xsd" node="/xs:schema">
<jaxb:schemaBindings>
<jaxb:package name="com.reuters.webservice.rkd.common"/>
</jaxb:schemaBindings>
</jaxb:bindings>

</jaxb:bindings>

```

In the example above the schemaLocation attribute in the 'jaxb:bindings' tag specifies external schema location and name attribute in the 'jaxb:package' tag specifies Java package name you want to specify for this schema.

In case external types are declared in wsdl use external jaxws:bindings files in order to map namespaces to Java package names.

Example (inline-schema.xml)

```

<jaxws:bindings
  wsdlLocation="http://api.rkd.reuters.com/schemas/TokenManagement/wsdl/TokenManagement_1_HttpsAndAnonymous.wsdl"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  xmlns:jaxb="http://java.sun.com/xml/ns/jaxb"
  xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/"
  xmlns:jaxws="http://java.sun.com/xml/ns/jaxws">

  <jaxws:package name="com.reuters.webservice.rkd.token.https"/>
</jaxws:bindings>

```

In the example above the wsdlLocation attribute in the jaxws-bindings element specifies wsdl url and name attribute in the jaxws:package element specifies Java package name you want to specify for types declared in wsdl (actually map targetNamespace attribute of wsdl to selected Java package).

51.3.1.3 Running Ant Script

Please create a subdirectory for the generated Java source code ("src" in our case) in the directory where you placed your Ant build.xml file. After that open command line in the directory where build.xml is located and run the following command:

```
ant
```

You should get something like this (make sure build is successful - in case of errors please check build.log file located in the same directory):



```

(D:\Projects\RTS-RKWM\generated_src\Metro\HttpsAndAnonymous) - Far
[wsimport] com\reuters\webservice\rkd\token\ObjectFactory.java
[wsimport] com\reuters\webservice\rkd\token\SetPasswordRequest1.java
[wsimport] com\reuters\webservice\rkd\token\SetPasswordResponse1.java
[wsimport] com\reuters\webservice\rkd\token\ValidateTokenRequest1.java
[wsimport] com\reuters\webservice\rkd\token\ValidateTokenResponse1.java
[wsimport] com\reuters\webservice\rkd\token\package-info.java
[wsimport] com\reuters\webservice\rkd\cache\AbsoluteExpiration.java
[wsimport] com\reuters\webservice\rkd\cache\AuthorizeOnlyCacheRequest.java
[wsimport] com\reuters\webservice\rkd\cache\AuthorizedCacheResponse.java
[wsimport] com\reuters\webservice\rkd\cache\CacheControlCacheResponse.java
[wsimport] com\reuters\webservice\rkd\cache\CacheRequest.java
[wsimport] com\reuters\webservice\rkd\cache\CacheResponse.java
[wsimport] com\reuters\webservice\rkd\cache\CacheStorage.java
[wsimport] com\reuters\webservice\rkd\cache\DoNotStoreCacheResponse.java
[wsimport] com\reuters\webservice\rkd\cache\ETagCacheRequest.java
[wsimport] com\reuters\webservice\rkd\cache\ETagValidation.java
[wsimport] com\reuters\webservice\rkd\cache\EndToEndReloadCacheRequest.java
[wsimport] com\reuters\webservice\rkd\cache\Expiration.java
[wsimport] com\reuters\webservice\rkd\cache\LastModifiedCacheRequest.java
[wsimport] com\reuters\webservice\rkd\cache\LastModifiedValidation.java
[wsimport] com\reuters\webservice\rkd\cache\NoData.java
[wsimport] com\reuters\webservice\rkd\cache\NotModifiedCacheResponse.java
[wsimport] com\reuters\webservice\rkd\cache\ObjectFactory.java
[wsimport] com\reuters\webservice\rkd\cache\PassThroughCacheRequest.java
[wsimport] com\reuters\webservice\rkd\cache\RelativeExpiration.java
[wsimport] com\reuters\webservice\rkd\cache\Validation.java
[wsimport] com\reuters\webservice\rkd\cache\Warning.java
[wsimport] com\reuters\webservice\rkd\cache\package-info.java
[wsimport] com\reuters\webservice\rkd\exceptions\ClientErrorReference.java
[wsimport] com\reuters\webservice\rkd\exceptions\ObjectFactory.java
[wsimport] com\reuters\webservice\rkd\exceptions\package-info.java
[wsimport] com\microsoft\schemas\serialization\ObjectFactory.java
[wsimport] com\reuters\webservice\rkd\common\AuthorizationType.java
[wsimport] com\reuters\webservice\rkd\common\ObjectFactory.java
[wsimport] com\reuters\webservice\rkd\common\package-info.java
[wsimport] com\reuters\webservice\rkd\token\https\ITokenManagement1.java
[wsimport] com\reuters\webservice\rkd\token\https\ITokenManagement1HttpsAndAnonymousITokenManagement1HttpsAndAnonymousCreate
eImpersonationToken2ClientErrorReferenceFaultMessage.java
[wsimport] com\reuters\webservice\rkd\token\https\ITokenManagement1ITokenManagement1HttpsAndAnonymousCreateServiceToken1Cli
entErrorReferenceFaultMessage.java
[wsimport] com\reuters\webservice\rkd\token\https\TokenManagement1.java
[wsimport] com\reuters\webservice\rkd\token\https\package-info.java

BUILD SUCCESSFUL
Total time: 10 seconds

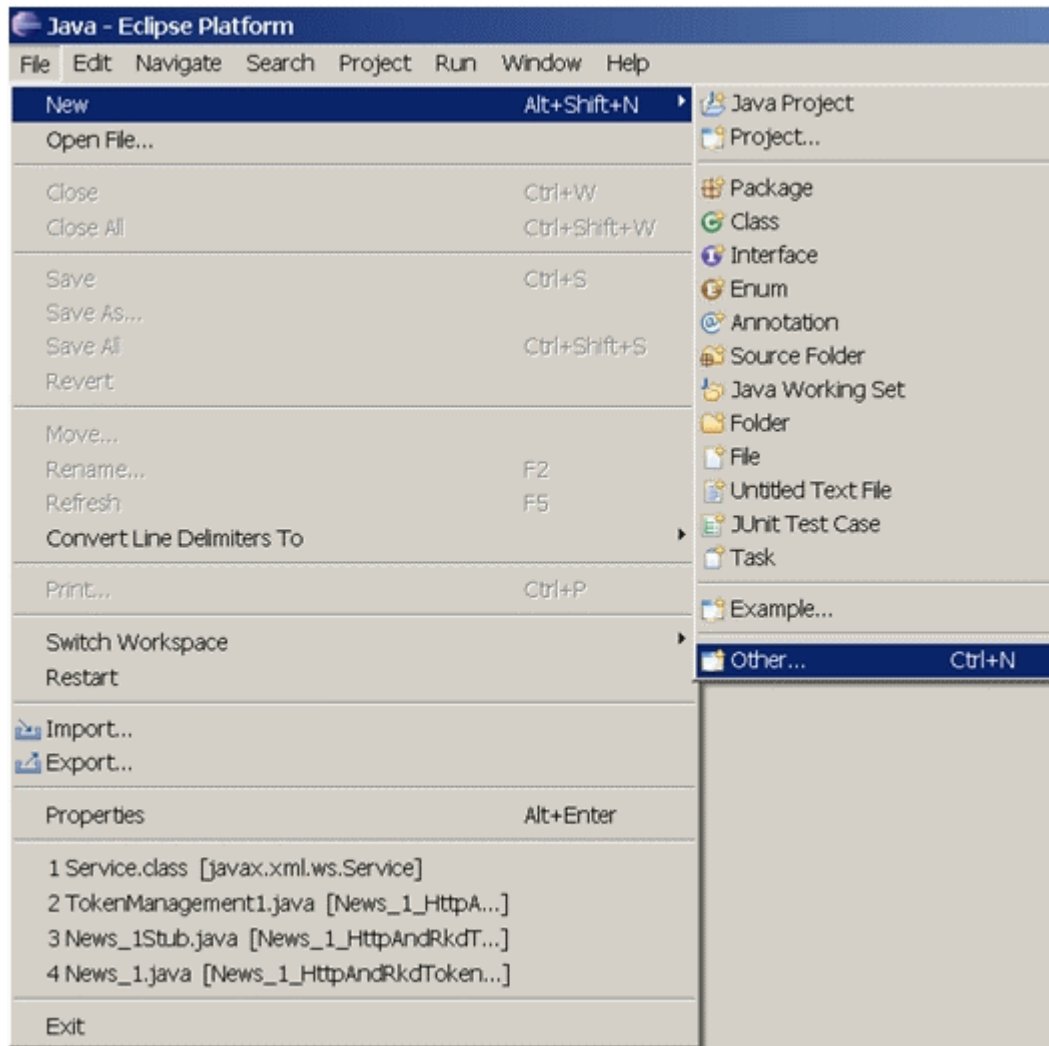
D:\Projects\RTS-RKWM\generated_src\Metro\HttpsAndAnonymous>
1 Left 2 Right 3 View 4 Edit 5 Print 6 MLink 7 Find 8 History 9 Video 10 Free 11 ViewHs 12 FoldHs

```

51.4 Creating Eclipse Project Based on Java Files Generated by Wsimport Ant Task Using Sun Metro Framework

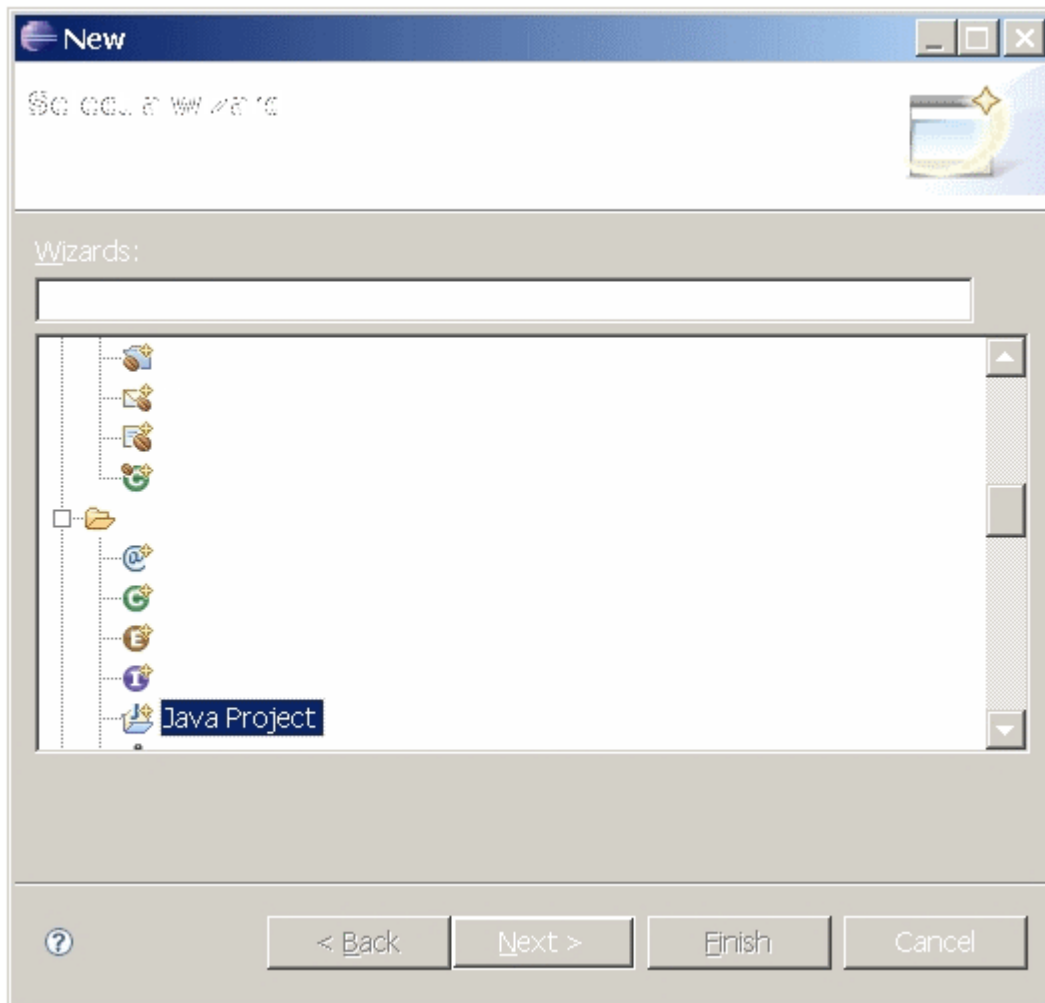
First, create a new Java project: File->New->Other:





In the next wizard window select Java Project and click the "**Next >**" button:





Then enter project name and click the "**Next >**" button:



New Java Project

Create a Java Project

Create a Java project in the workspace or in an external location.

Project name:

Contents

- ☒ Create new project in workspace
- ☐ Create project from existing source

Directory: [Browse...](#)

JRE

- ☒ Use default JRE (Currently 'jdk1.6.0') [Configure JREs...](#)
- ☐ Use a project specific JRE:
- ☐ Use an execution environment JRE:

Project layout

- ☐ Use project folder as root for sources and class files
- ☒ Create separate folders for sources and class files [Configure default...](#)

Working sets

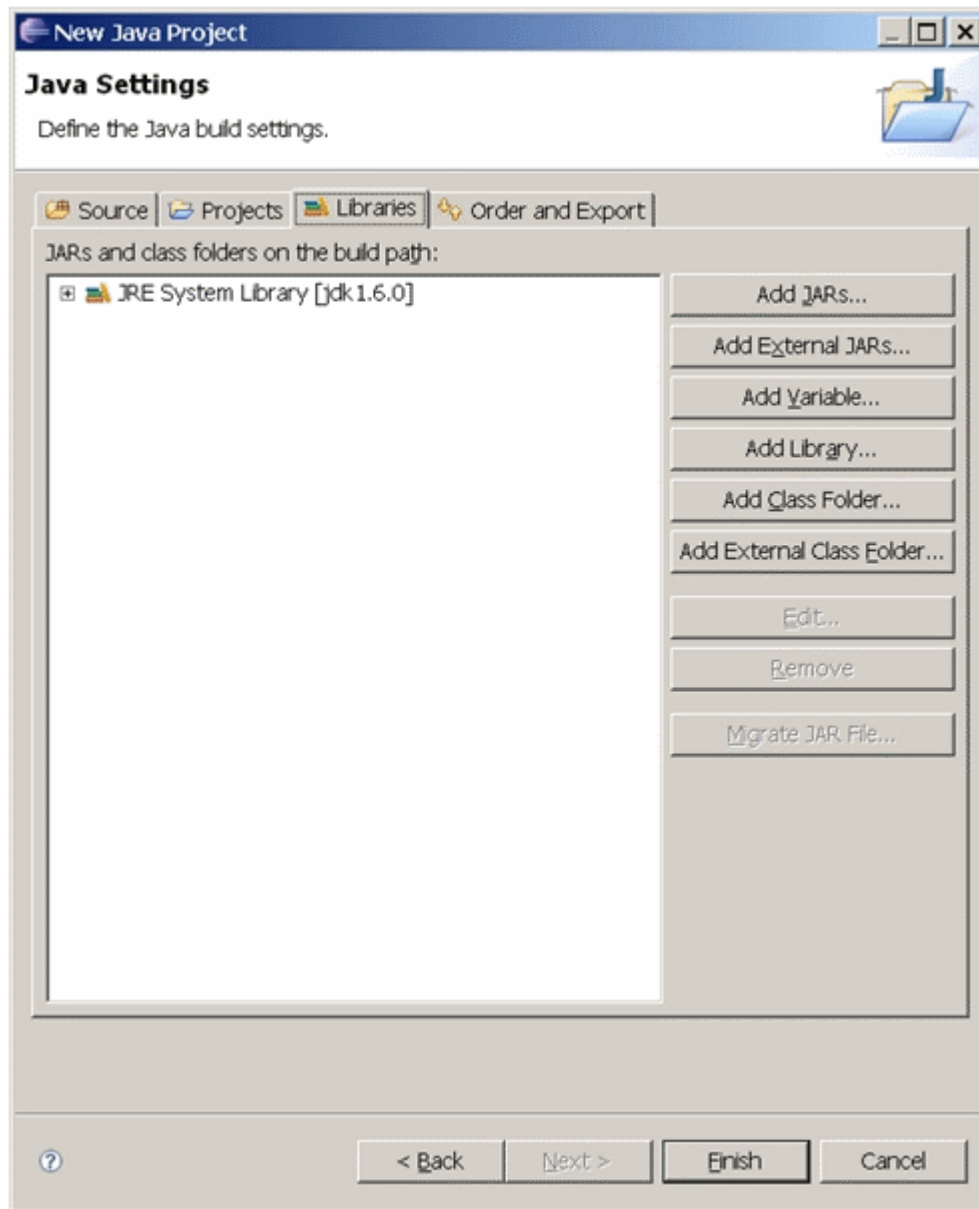
☐ Add project to working sets

Working sets: [Select...](#)

[?](#) [< Back](#) [Next >](#) [Finish](#) [Cancel](#)

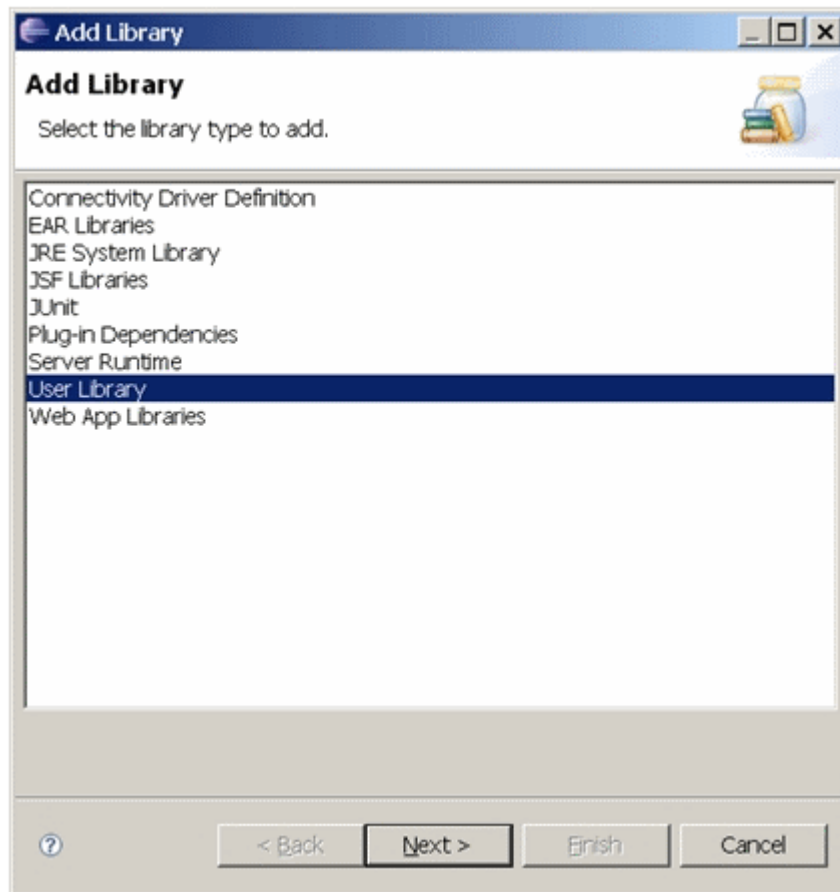
In the next window select Libraries tab (we need to create Sun Metro library and add it to the project) - click the "**Add Library...**" button:





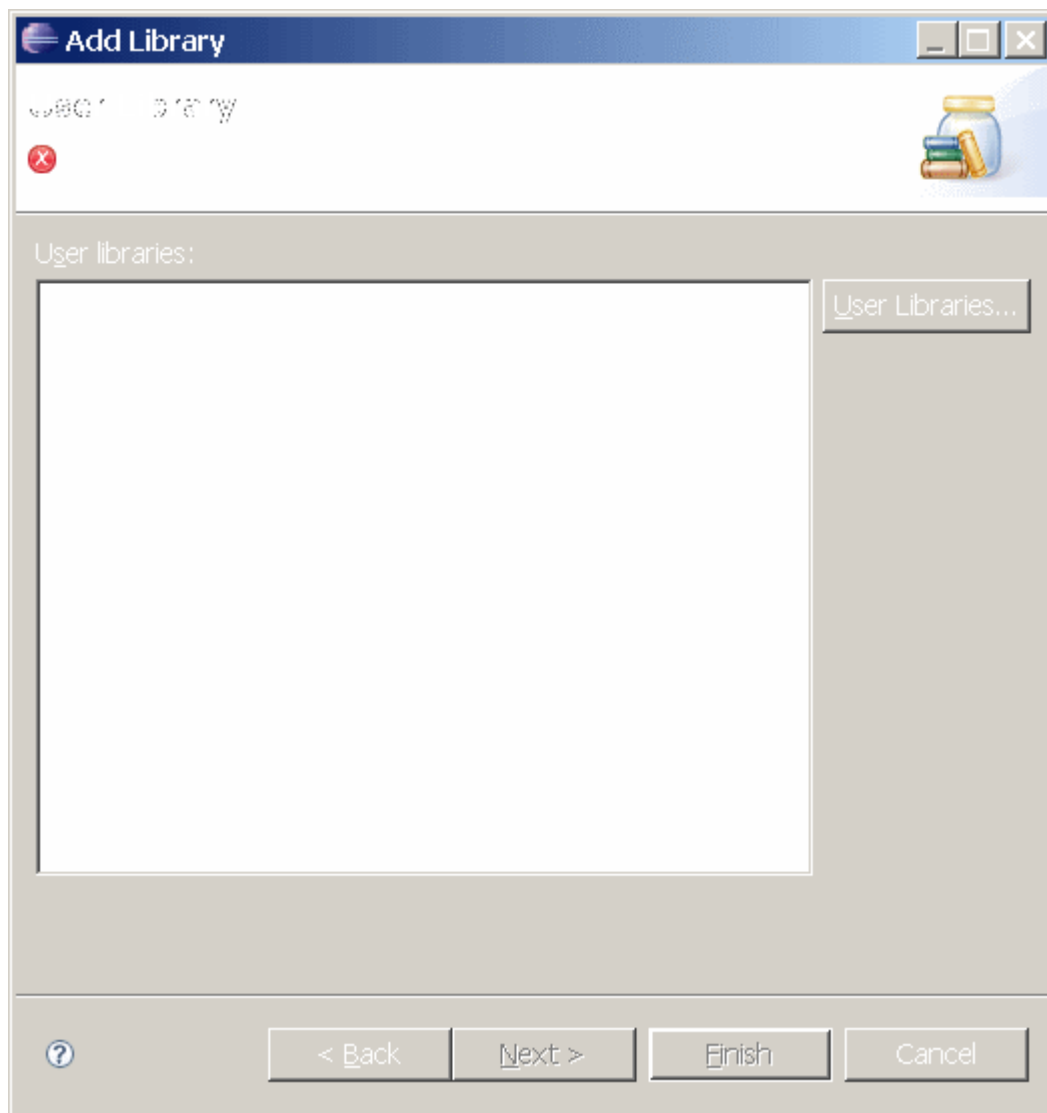
Then select "User Library" and click the "**Next >**" button:





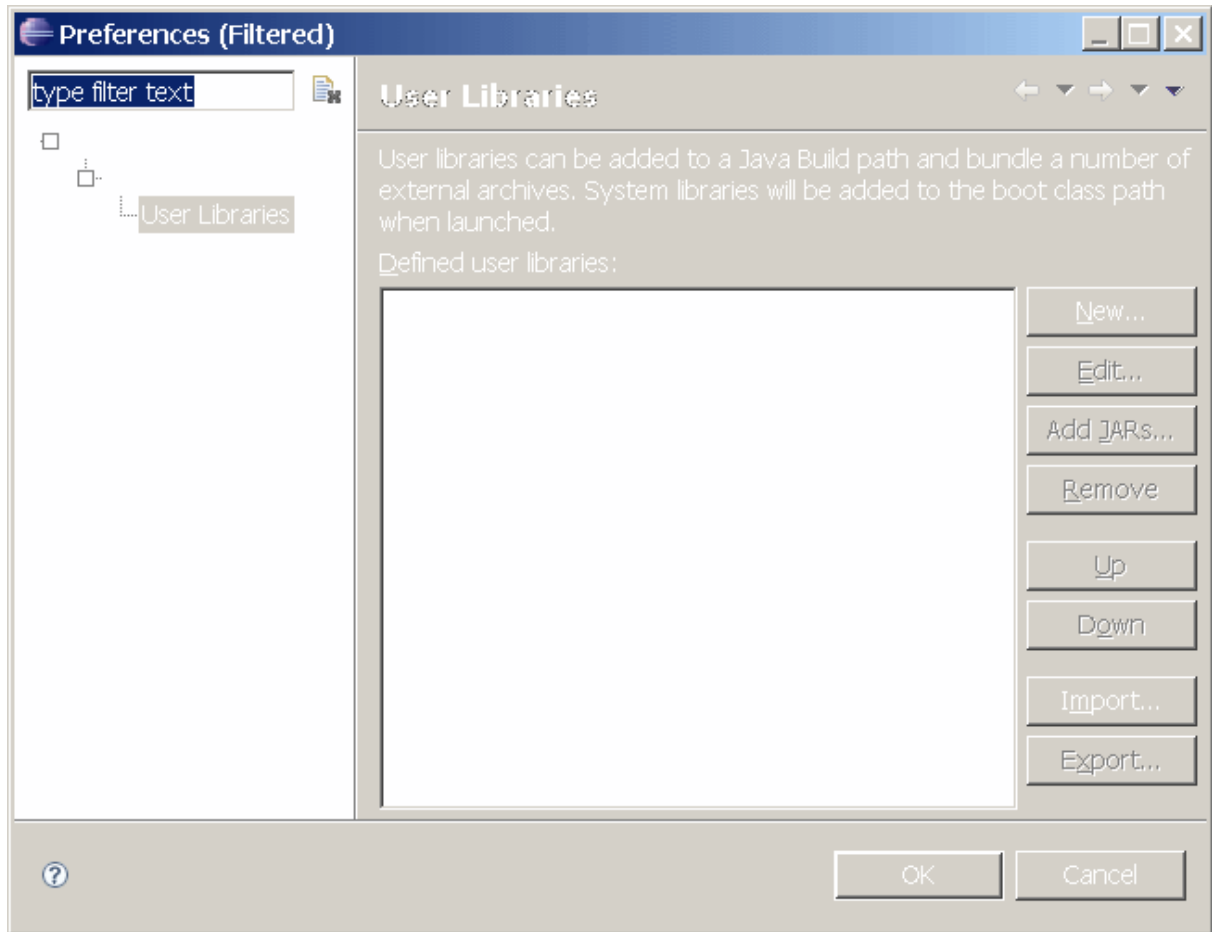
In the new window click the "**User Libraries...**" button:



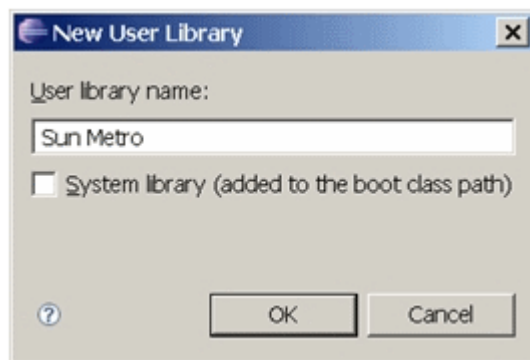


Then in the next wizard dialog click the "**New...**" button in order to create a new library:



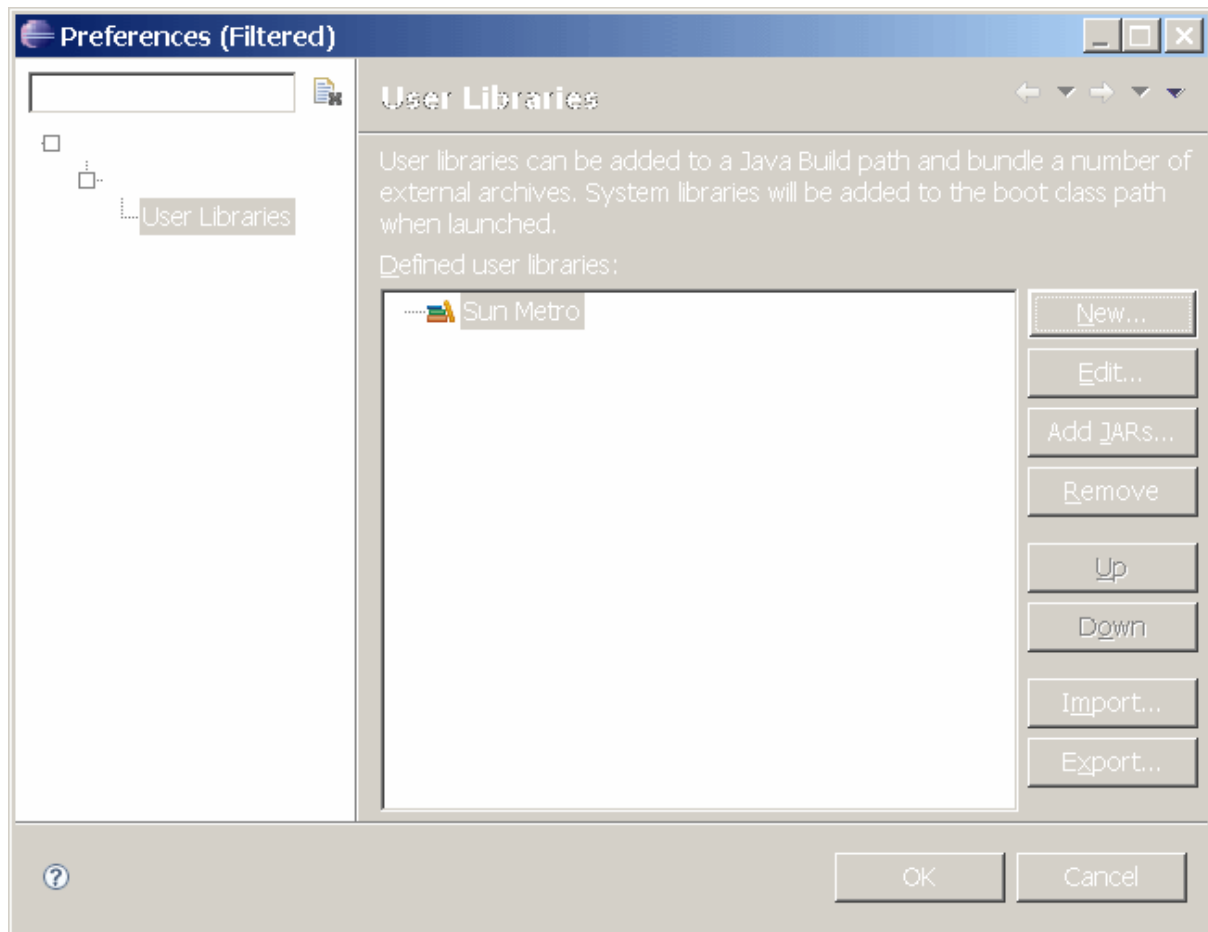


Enter library name:



The new library will be added:

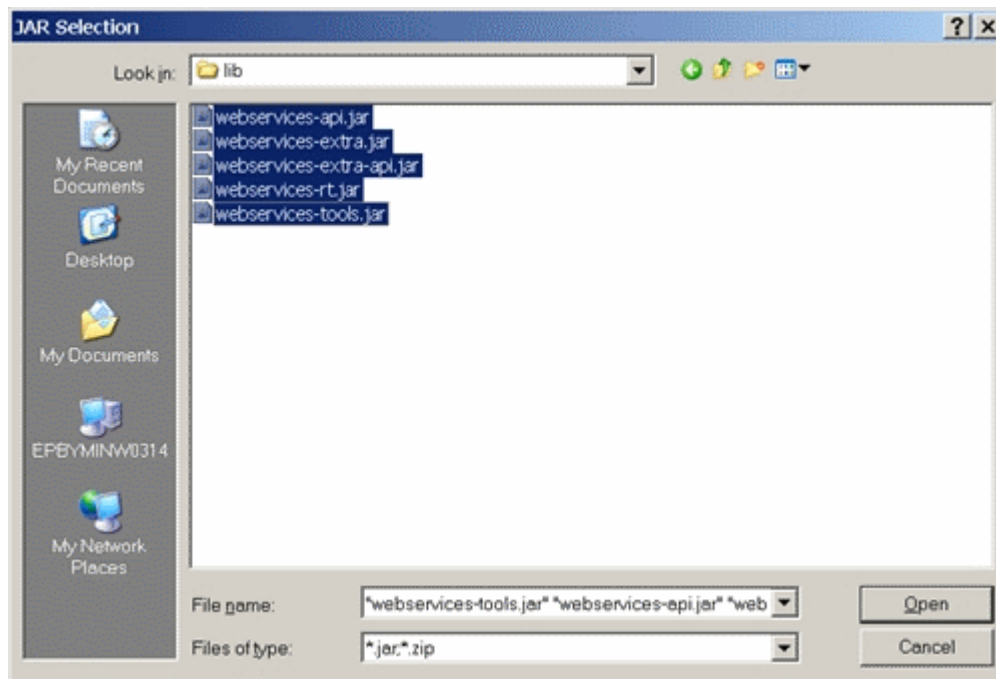




Then please make sure it is selected in the dialog and click the "**Add JARs...**" button.

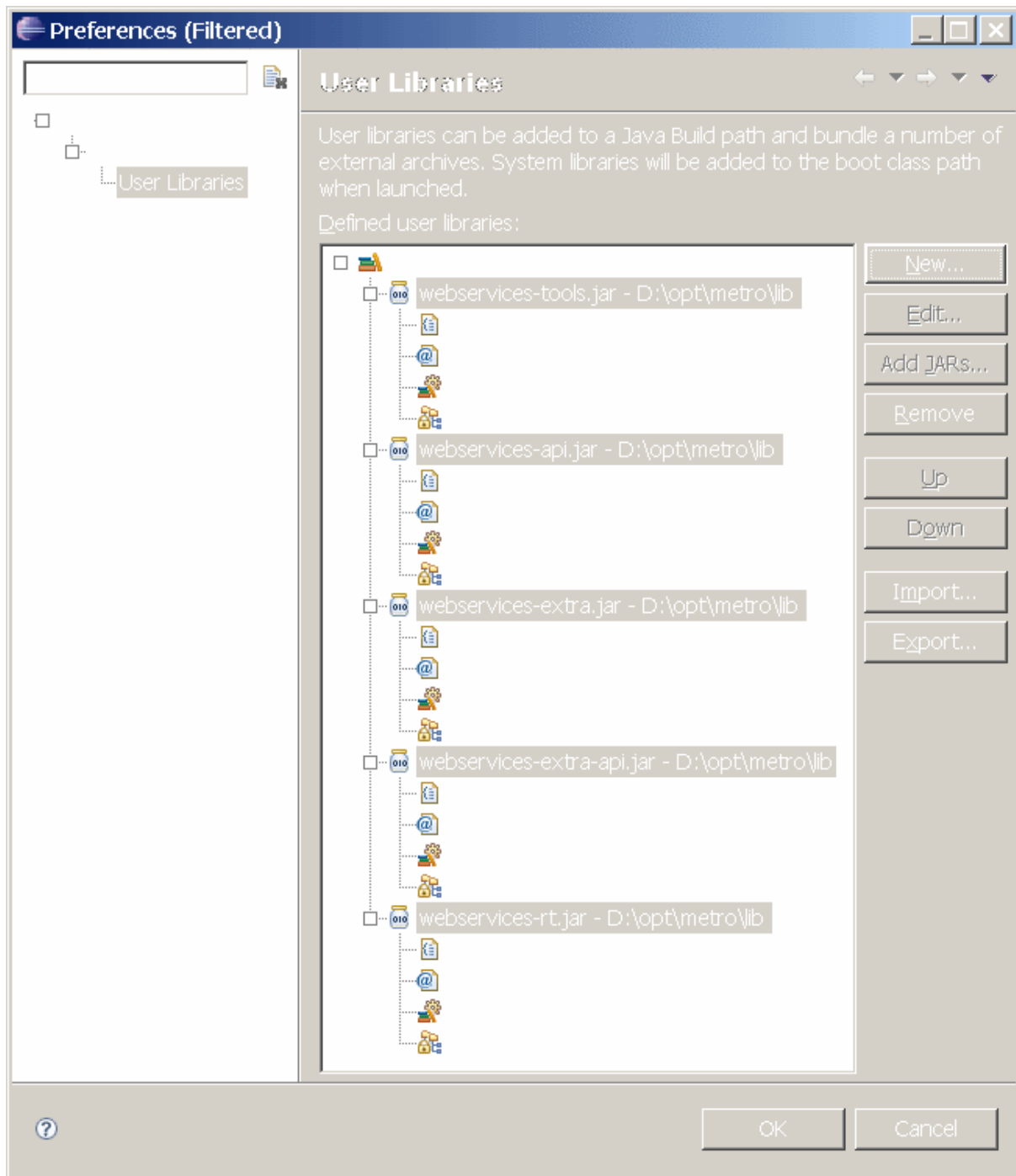
Add all jar-files which are usually located in the lib subdirectory of your Sun Metro installation:





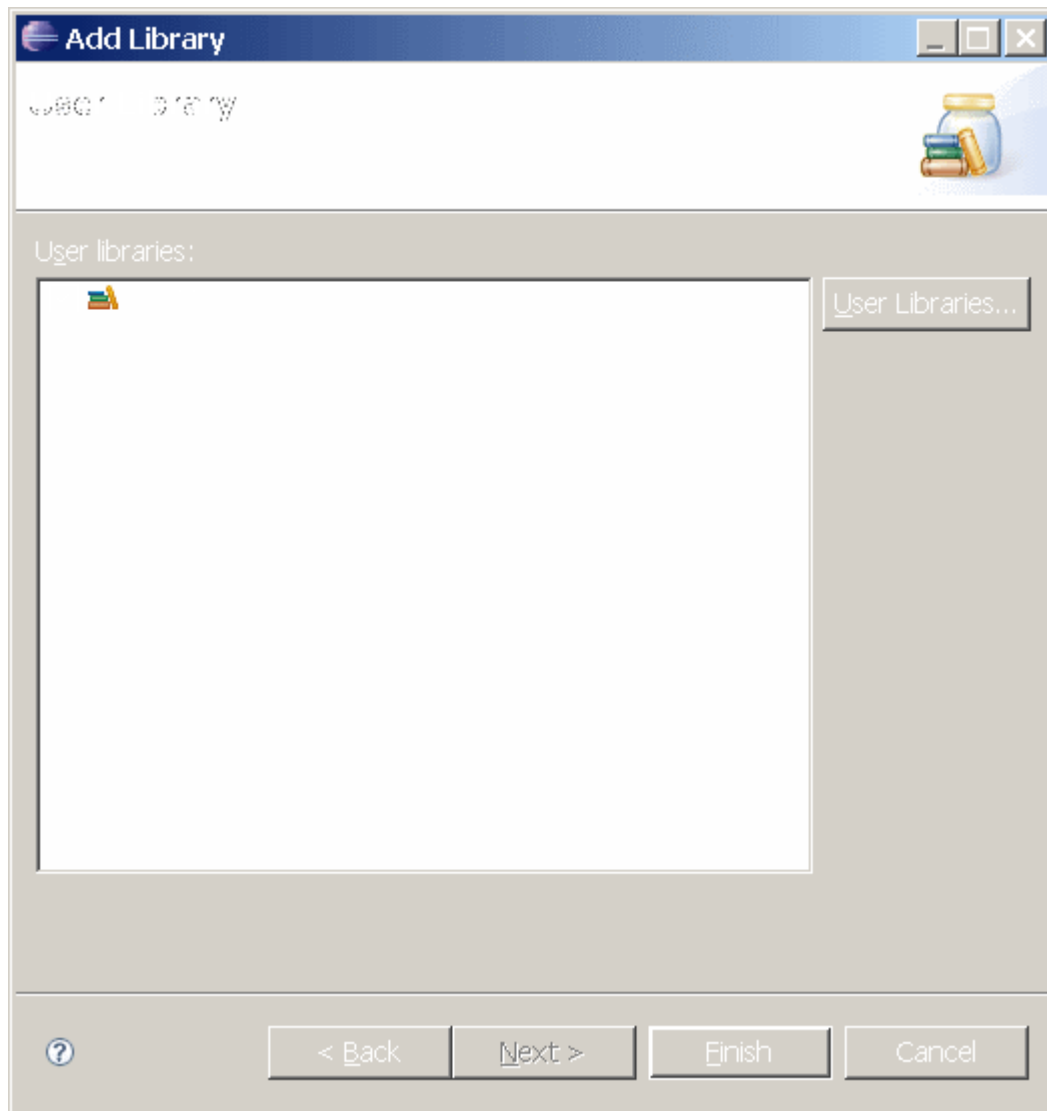
You will see on the next screen that jar-files were added - click the **"OK"** button.





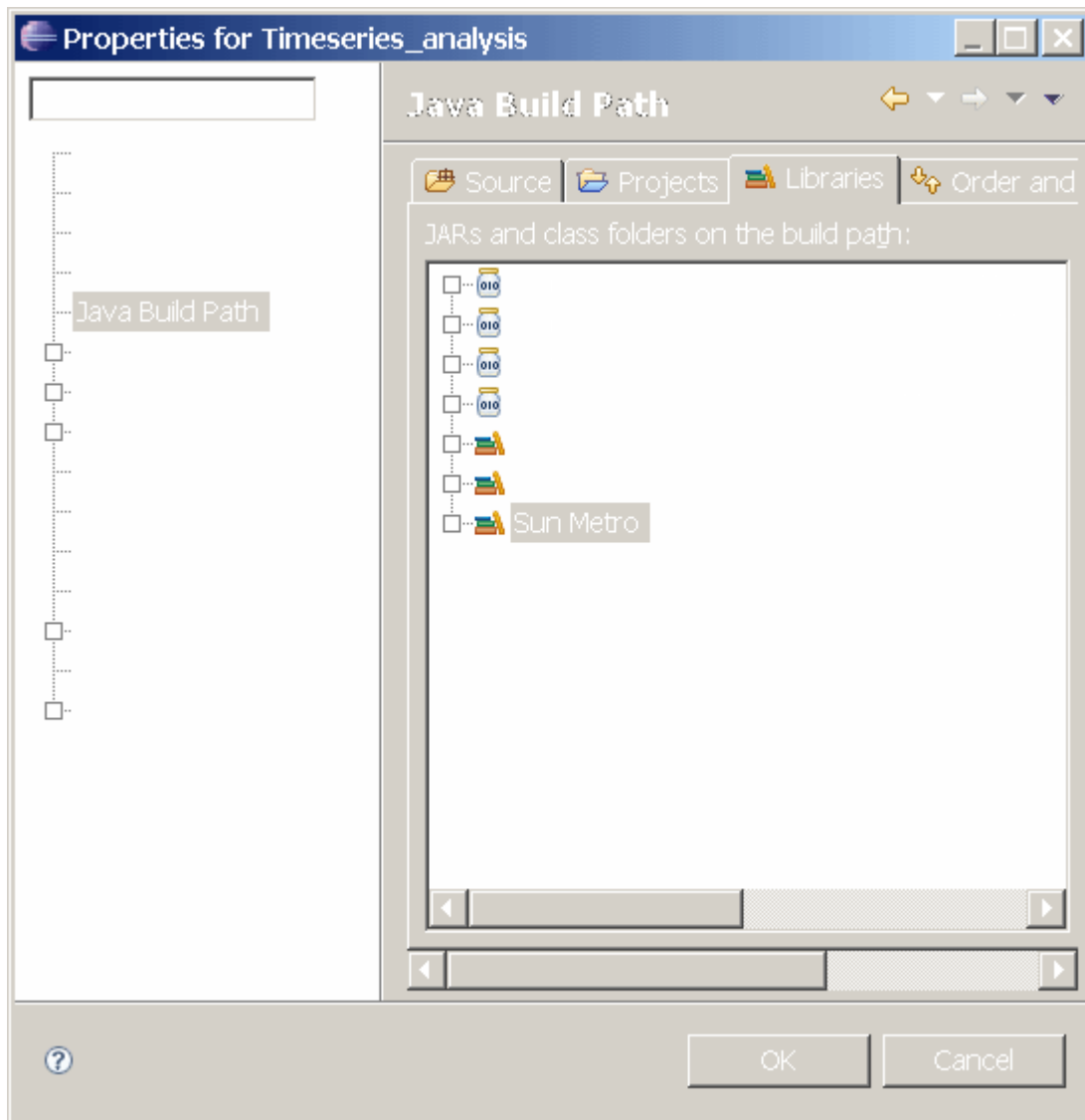
On the next screen, make sure your new library is selected and click the "**Finish**" button.





As a result, Sun Metro jar-files will be available in your project:

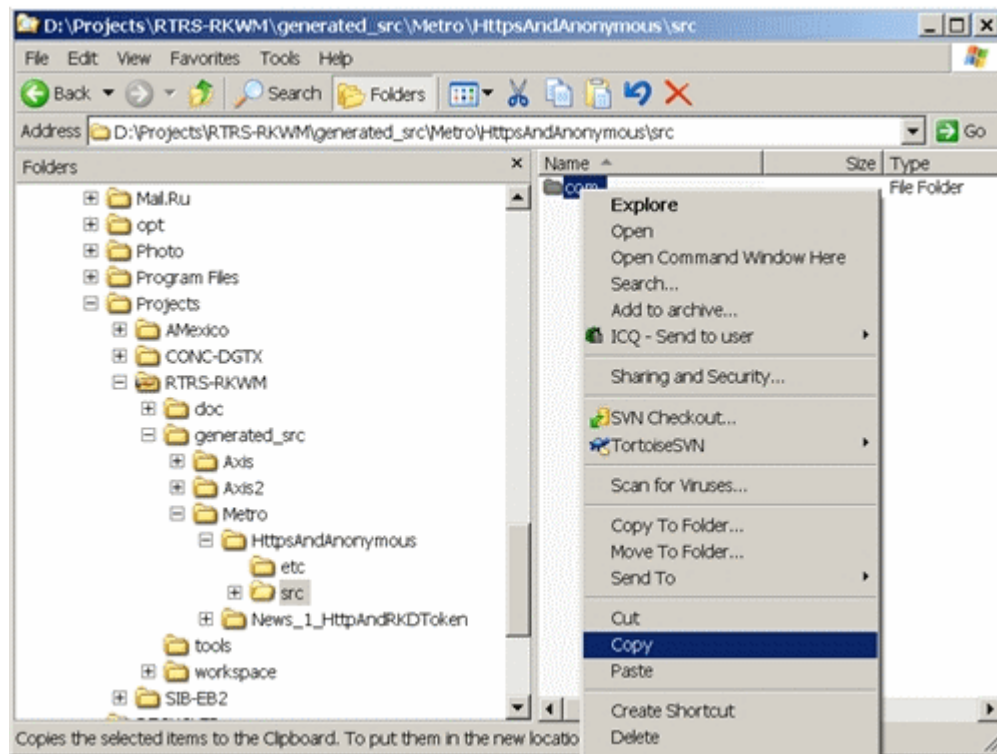




After that you need to copy the generated Java source code to the new Eclipse project.

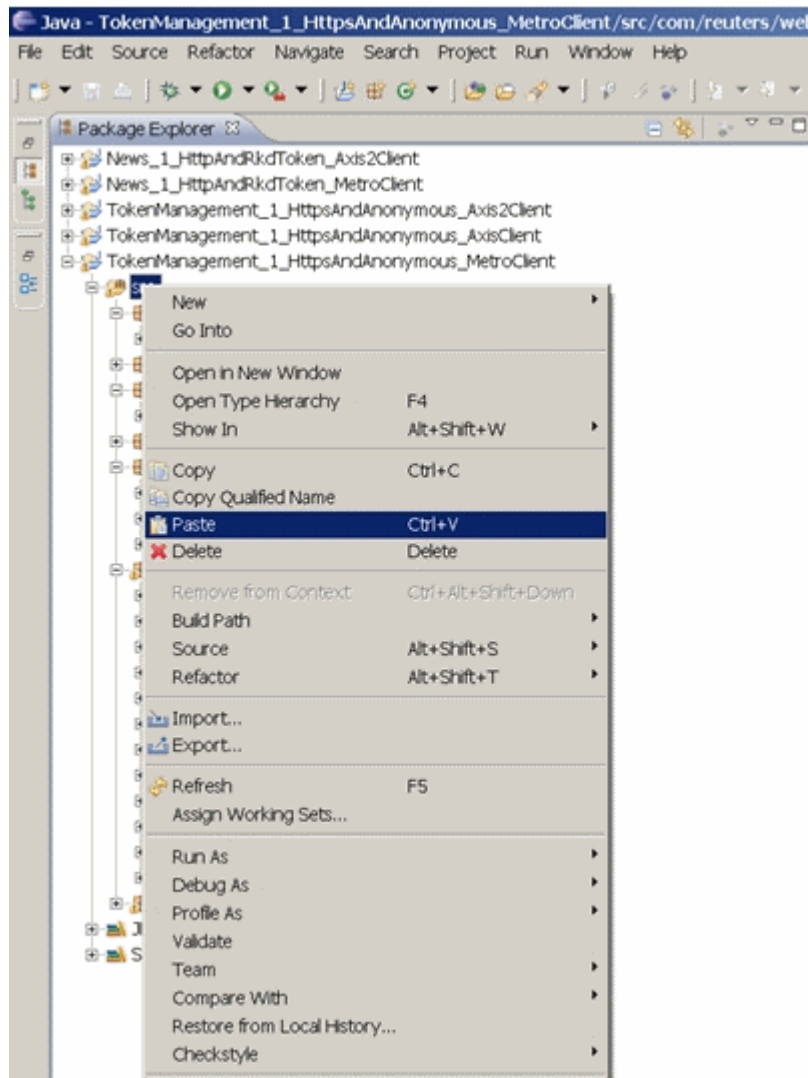
Please do the following:

1. Copy the directory in Windows Explorer as on the picture given below:



2. Then paste it directly into Eclipse workspace into source code directory ("src" in our case):





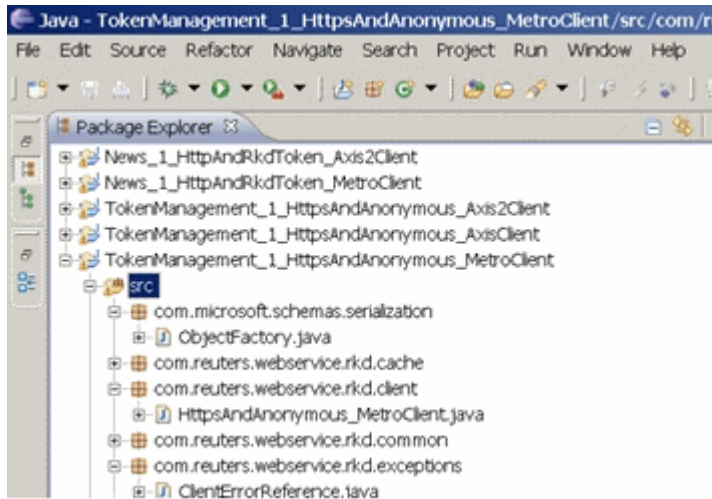
Source code must appear in Eclipse - project preparation has finished now.

51.5 Creating Java Client Application for Webservice Access in Eclipse Project

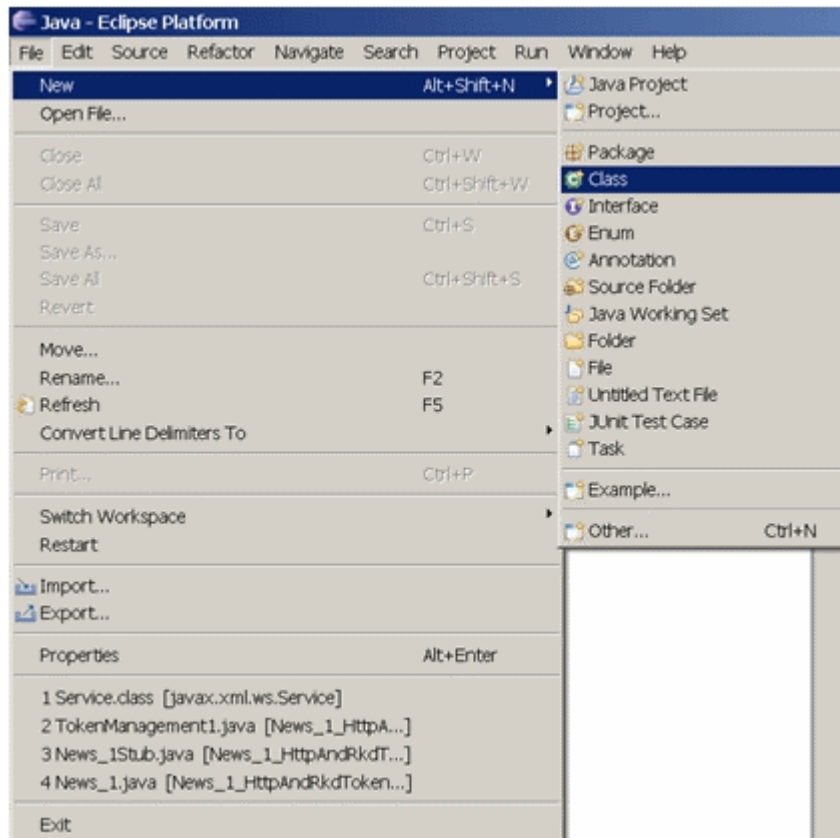
It is assumed that the project described in the previous section has been created. If not, please create it according to the instructions given in the corresponding chapter.

Now select the source code directory of the project in Eclipse as shown on the picture below:





Then select New->Class in the menu:



In the new window please specify a package name for the new class (com.reuters.webservice.rkd.client in our case) and select the "public static void main (String[] args)" check box in "Which method stubs would you like to create?" and click the "Finish" button:



New Java Class

Create a new Java class.

Source folder: Management_1_HttpsAndAnonymous_MetroClient/src Browse...

Package: com.reuters.webservice.rkd.client Browse...

☐ Enclosing type: Browse...

Name: HttpsAndAnonymous_MetroClient

Modifiers: ☒ public ☐ default ☐ private ☐ protected
☐ abstract ☐ final ☐ static

Superclass: java.lang.Object Browse...

Interfaces: Add... Remove

Which method stubs would you like to create?

☒ public static void main(String[] args)

☐ Constructors from superclass

☐ Inherited abstract methods

Do you want to add comments? (Configure templates and default value [here](#))

☒ Generate comments

Finish Cancel

You can enter you client code now (at the moment you can enter client code sample from the next section).

51.6 Client Code Sample

This section provides client code samples.

51.6.1 Sun Metro

Sun Metro Code Sample

```
package com.reuters.webservice.rkd.client;

import java.io.BufferedReader;
import java.io.IOException;
import java.io.InputStreamReader;
import java.io.StringReader;
import javax.xml.ws.soap.AddressingFeature;

import org.xml.sax.InputSource;
```




```

import org.xml.sax.SAXException;

import com.reuters.webservice.rkd.token.CreateImpersonationTokenRequest2;
import com.reuters.webservice.rkd.token.CreateServiceTokenRequest1;
import com.reuters.webservice.rkd.token.CreateTokenResponse;
import com.reuters.webservice.rkd.token.EffectiveUsernameType;
import com.reuters.webservice.rkd.token.https.ITokenManagement1;
import com.reuters.webservice.rkd.token.https.
ITokenManagement1HttpsAndAnonymousITokenManagement1HttpsAndAnonymousCreateImpersonationToken2ClientErrorReferenceFaultMessage;
import com.reuters.webservice.rkd.token.https.
ITokenManagement1ITokenManagement1HttpsAndAnonymousCreateServiceToken1ClientErrorReferenceFaultMessage;
import com.reuters.webservice.rkd.token.https.TokenManagement1;
import com.sun.org.apache.xerces.internal.parsers.DOMParser;
import com.sun.xml.ws.developer.WSBindingProvider;
import com.sun.xml.ws.messagedump.MessageDumpingFeature;

public class HttpsAndAnonymous_MetroClient {

    /**
     * @param args
     */
    public static void main(String[] args) {

        System.out.println("HttpsAndAnonymous_MetroClient start");

        // create the service
        TokenManagement1 service = new TokenManagement1();
        // Prepare to plug in the code that allows to read SOAP messages
        MessageDumpingFeature messageDumper = new MessageDumpingFeature();
        // get the port
        ITokenManagement1 port = service

        .getHttpsAndAnonymousITokenManagement1HttpsAndAnonymous(
            new AddressingFeature(true), messageDumper);

        // enter service user credentials
        // open up standard input
        BufferedReader br = new BufferedReader(new InputStreamReader(System.in));

        String serviceUserName = null;
        String serviceUserPassword = null;
        String serviceUserApplicationID = null;

        try {
            System.out.println("Please enter service username: ");
            serviceUserName = br.readLine();
            System.out.println("Please enter service user password: ");
            serviceUserPassword = br.readLine();
            System.out.println("Please enter application ID: ");
            serviceUserApplicationID = br.readLine();
        } catch (IOException ioe) {
            System.out.println("IO error trying to read service user credentials!");
            System.exit(1);
        }

        // creating service token

        System.out.println("Creating service token...");

        CreateServiceTokenRequest1 request = new CreateServiceTokenRequest1();
        CreateTokenResponse response;
        request.setApplicationID(serviceUserApplicationID);
        request.setPassword(serviceUserPassword);
        request.setUsername(serviceUserName);

        try {

            response = port.createServiceToken1(request);

            System.out.println("Soap request message: ");
            System.out.println(messageDumper.nextMessage());

            System.out.println("Soap response message: ");

```



```

System.out.println(messageDumper.nextMessage());

System.out.println("Service token created successfully. Valid till: " + response.getExpiration().toString());
System.out.println("Is valid now: " + response.getExpiration().isValid());

} catch (ITokenManagement1ITokenManagement1HttpsAndAnonymousCreateServiceToken1ClientErrorReferenceFaultMessage e) {

    System.out.println("Soap request message: ");
    System.out.println(messageDumper.nextMessage());

    String soapResponse = messageDumper.nextMessage();

    System.out.println("Soap response message: ");
    System.out.println(soapResponse);

    try {

        DOMParser parser = new DOMParser();
        parser.parse(new InputSource(new StringReader(soapResponse)));
    } catch (IOException ioEx) {
        ioEx.printStackTrace();
    } catch (SAXException saxEx) {
        saxEx.printStackTrace();
    }

    System.out
        .println("Service token error message: " + e.getMessage());
    System.out.println(e.getFaultInfo());

    System.out.println("Service token error reference "
        + e.getFaultInfo().getErrorReference());
    System.out.println("Service token server reference "
        + e.getFaultInfo().getServerReference());
}

String effectiveUserName = null;

try {

    System.out.println("Please enter effective username: ");
    effectiveUserName = br.readLine();
} catch (IOException ioe) {
    System.out.println("IO error trying to read effective user name!");
    System.exit(1);
}

// creating impersonation token

System.out.println("Creating impersonation token...");

CreateImpersonationTokenRequest2 impersonationRequest = new CreateImpersonationTokenRequest2();
impersonationRequest.setApplicationID(serviceUserApplicationID);
impersonationRequest.setPassword(serviceUserPassword);
impersonationRequest.setUsername(serviceUserName);
EffectiveUsernameType effectiveUser = new EffectiveUsernameType();
effectiveUser.setValue(effectiveUserName);
impersonationRequest.setEffectiveUsername(effectiveUser);

try {

    response = port.createImpersonationToken2(impersonationRequest);
    System.out.println("Impersonation token created successfully. Valid till: " + response.getExpiration().toString());
    System.out.println("Is valid now: " + response.getExpiration().isValid());

} catch
(ITokenManagement1HttpsAndAnonymousITokenManagement1HttpsAndAnonymousCreateImpersonationToken2ClientErrorReferenceFaultMessage e) {

    System.out.println("Impersonation token error message: " + e.getMessage());
    System.out.println("Impersonation token error reference " + e.getFaultInfo().getErrorReference());
    System.out.println("Impersonation token server reference " + e.getFaultInfo().getServerReference());

}

```



```

        System.out.println("HttpsAndAnonymous_MetroClient finish");
    }
}

```

In this code example we get service token and impersonation token. Let's describe the code in more details:

```
TokenManagement1 service = new TokenManagement1();
```

Here we instantiate service which will be used later in order to get Java proxy class.

```
ITokenManagement1 port = service
.getHttpsAndAnonymousITokenManagement1HttpsAndAnonymous(new AddressingFeature(true));
```

Here we get Java proxy class via a service instance. Please pay attention to the AddressingFeature class - it is recommended to pass it to proxy on the client side in order to make sure the WS-Addressing feature (which is required for TRKD services access) is supported on the client side. More information on WS-Addressing support for Java clients is available [here](#).

```

String serviceUserName = null;
String serviceUserPassword = null;
String serviceUserApplicationID = null;

try {

    System.out.println("Please enter service username: ");
    serviceUserName = br.readLine();
    System.out.println("Please enter service user password: ");
    serviceUserPassword = br.readLine();
    System.out.println("Please enter application ID: ");
    serviceUserApplicationID = br.readLine();
} catch (IOException ioe) {
    System.out.println("IO error trying to read service user credentials!");
    System.exit(1);
}

```

Here we read service username, password and application ID via command line.

```

CreateServiceTokenRequest1 request = new CreateServiceTokenRequest1();
CreateTokenResponse response;
request.setApplicationID(serviceUserApplicationID);
request.setPassword(serviceUserPassword);
request.setUsername(serviceUserName);

```

Here we prepare request which will be passed to the CreateServiceToken operation in service.

```

CreateTokenResponse response;
...
try {
    response = port.createServiceToken1(request);

    System.out.println("Service token created successfully. Valid till: " + response.getExpiration().toString());
}

```

Here we call the CreateServiceToken operation in service - the result is returned in the response object.

If there are problems during the operation call the corresponding exception is thrown and we print error message in a catch block:

```
System.out.println("Service token error message: " + e.getMessage());
```

In the code below we specify the effective username via command line:

```

String effectiveUserName = null;

try {
    System.out.println("Please enter effective username: ");
    effectiveUserName = br.readLine();
} catch (IOException ioe) {
    System.out.println("IO error trying to read effective user name!");
}

```



```

        System.exit(1);
    }

```

And then prepare request which will be passed to the CreateImpersonationToken operation in service. EffectiveUsername type was generated automatically from the corresponding xsd schema.

```
System.out.println("Creating impersonation token...");
```

```

CreateImpersonationTokenRequest2 impersonationRequest = new CreateImpersonationTokenRequest2();
impersonationRequest.setApplicationID(serviceUserApplicationID);
impersonationRequest.setPassword(serviceUserPassword);
impersonationRequest.setUsername(serviceUserName);
EffectiveUsernameType effectiveUser = new EffectiveUsernameType();
effectiveUser.setValue(effectiveUserName);
impersonationRequest.setEffectiveUsername(effectiveUser);

```

In the code below we call CreateImpersonationToken operation in service - the result is returned in the response object.

```

response = port.createImpersonationToken2(impersonationRequest);
System.out
    .println("Impersonation token created successfully. Valid till: " + response.getExpiration().toString());

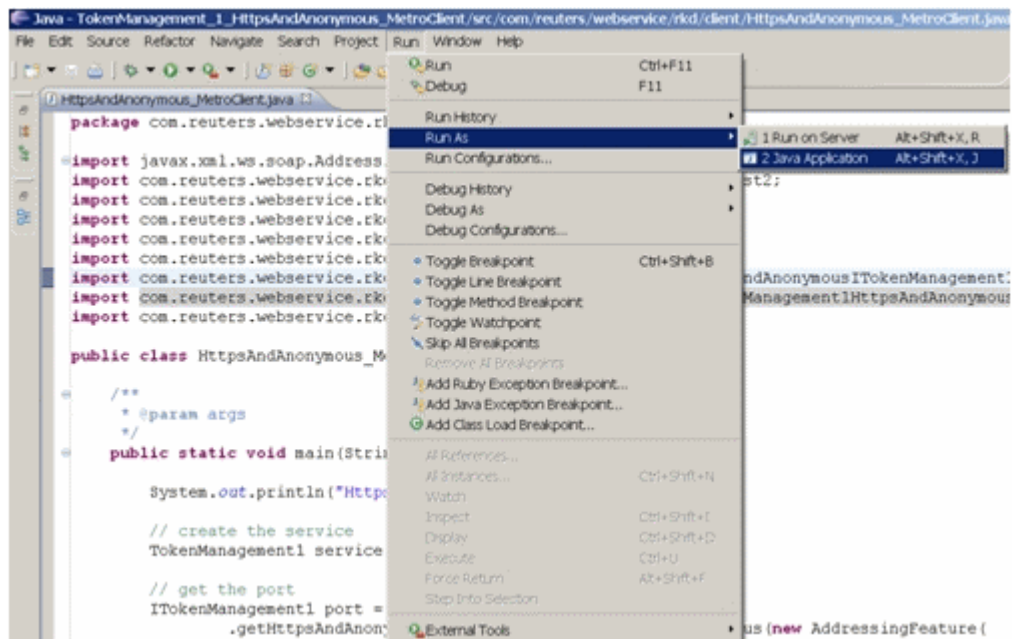
```

If there are problems during the operation call the corresponding exception is thrown and we print error message in a catch block:

```
System.out.println("Impersonation token error message: " + e.getMessage());
```

51.6.2 Running Code Sample

After you enter the code go to Run->Run As-> Java application:



You will receive Console output - something like on the picture below:



```

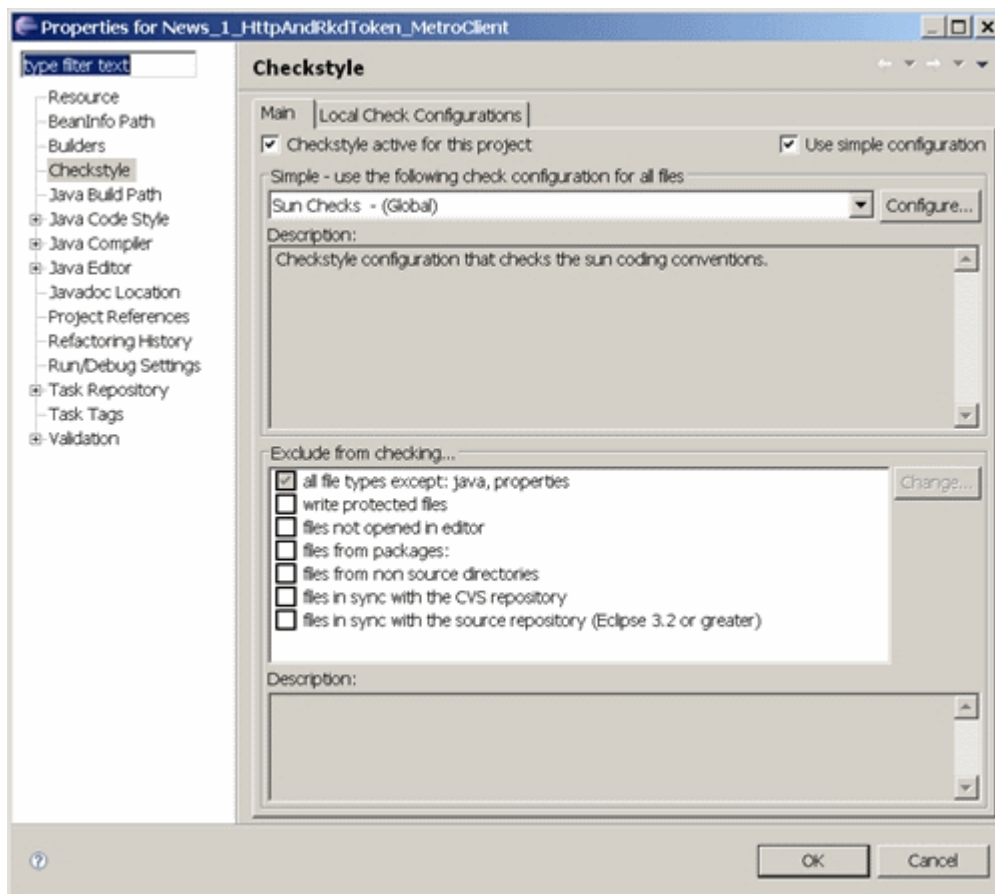
Console
<terminated> HttpsAndAnonymous_MetroClient [Java Application] D:\opt\java\jdk1.6.0\bin\javaw.exe (Mar 19, 2009 3:10:53 PM)
HttpsAndAnonymous_MetroClient start
Creating service token...
Service token created successfully. Valid till: 2009-03-19T15:10:57.8273933Z
Is valid now: true
Creating impersonation token...
Impersonation token created successfully. Valid till: 2009-03-19T15:10:59.4614846Z
Is valid now: true
HttpsAndAnonymous_MetroClient finish

```

51.7 Code Style Recommendations

We recommend you using Code conventions for the Java Programming Language.

You can setup Eclipse to check your project source code via Project->Properties - Checkstyle tab and make sure the "**Checkstyle active for this project**" check box is selected as shown on the picture below:



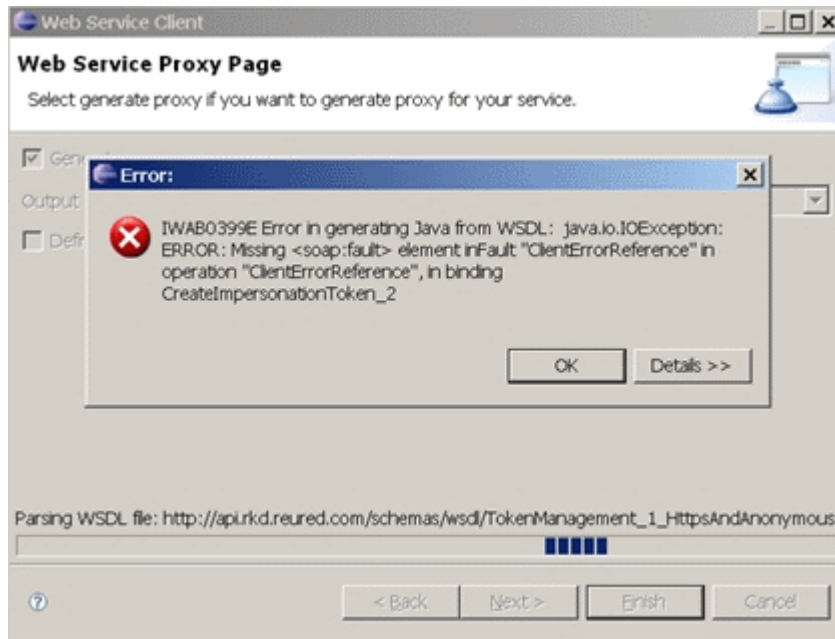
51.8 Typical Problems

This section lists typical problems you may come across when building Java TRKD Client.



51.8.1 Errors when Trying to Import WSDL via Java IDEs

Java IDEs like Eclipse provide wizards that allow creating wrapper classes from WSDL files. But quite often various errors occur as on the picture below. Often it is not possible to use various import options when you import via Java IDE which are actually required. We recommend using Ant tasks in specialized tools which are bundled in web services frameworks for wsdl import. Please review the recommended solution for Sun Metro.



51.8.2 MustUnderstand Exception

Mustunderstand SOAP exception

For example:

Exception in thread "main" javax.xml.ws.soap.SOAPFaultException: MustUnderstand headers: [{http://www.w3.org/2005/08/addressing}Action] are not understood

```

at com.sun.xml.internal.ws.protocol.soap.MUTube.createMUSOAPFaultException(MUTube.java:140)
at com.sun.xml.internal.ws.protocol.soap.ClientMUTube.processResponse(ClientMUTube.java:82)
at com.sun.xml.internal.ws.api.pipe.Fiber.__doRun(Fiber.java:591)
at com.sun.xml.internal.ws.api.pipe.Fiber._doRun(Fiber.java:540)
at com.sun.xml.internal.ws.api.pipe.Fiber.doRun(Fiber.java:525)
at com.sun.xml.internal.ws.api.pipe.Fiber.runSync(Fiber.java:422)
at com.sun.xml.internal.ws.client.Stub.process(Stub.java:235)
at com.sun.xml.internal.ws.client.sei.SEIStub.doProcess(SEIStub.java:120)
at com.sun.xml.internal.ws.client.sei.SyncMethodHandler.invoke(SyncMethodHandler.java:230)
at com.sun.xml.internal.ws.client.sei.SyncMethodHandler.invoke(SyncMethodHandler.java:210)
at com.sun.xml.internal.ws.client.sei.SEIStub.invoke(SEIStub.java:103)
at $Proxy39.retrieveItem1(Unknown Source)
at QuoteClient.Quote.print(Quote.java:53)
at QuoteClient.Main.main(Main.java:31)

```

Java Result: 1

The most possible reason of the error is that WS-Addressing feature is not supported (or not engaged - please review code samples sections in order to engage WS-addressing feature section) by your Java web services framework.



chapter 52 Web Service User Throttling

The purpose of web service throttling is to limit the load that clients might place on TRKD API services, and thus to prevent abusive clients from impacting other clients and to protect backend systems from unexpected workload increase. The amount of load is determined by the number of requests per second made by clients. A client is identified by a TRKD API application ID.

Throttle Group

All TRKD API service operations are aggregated into throttle groups. A throttle group is a combination of TRKD API service operations that are throttled as a single entity. An operation may belong to one throttle group only.

For example:

Throttle group 'Quotes' is defined as a combination of the following operations of different services:

Quotes_1/RetrieveItem_1
 Quotes_1/RetrieveItem_2
 Quotes_1/RetrieveItem_3
 QuoteLists_1/GetSimpleData_1

A client with the limit of 50 requests per second for the throttle group 'Quotes' can make 50 requests per second for all these operations with any proportions, e.g.

30 requests per second for Quotes_1/RetrieveItem_1
 5 requests per second for Quotes_1/RetrieveItem_2
 5 requests per second for Quotes_1/RetrieveItem_3 and
 10 requests per second for QuoteLists_1/GetSimpleData_1.

Client Limit

The algorithms of calculating real-time usage are based on a number of requests per second made by a client. The usage is updated upon receiving a request by a destination TRKD API server. A continuous flow of client requests with the rate higher than the limit will eventually be throttled by the TRKD API.

52.1 Simple Way of Handling Throttling Exceptions

When clients hit the limit, they have to wait for Δt interval before repeating or sending a new request without being throttled, where Δt is calculated as:

$$\Delta t = \frac{1 \text{ second}}{\text{limit}}, \text{ where limit is the limit for the client}$$

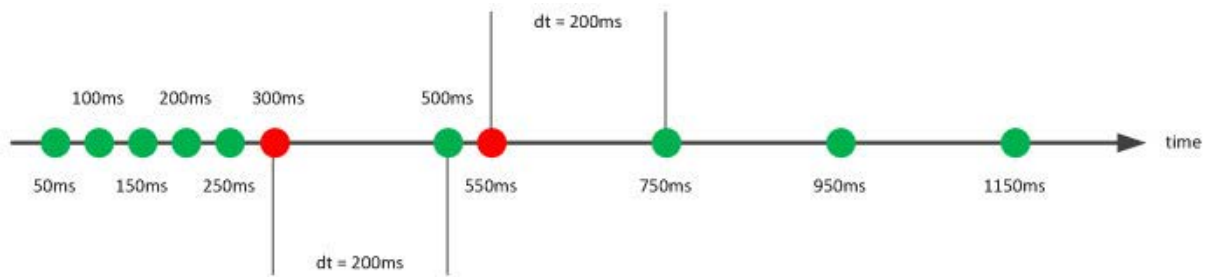
Any request made before the Δt interval expires can be throttled by the system.

From the above, the following statement is also true:

A client will not be throttled by the TRKD API if the interval between requests is longer than Δt .

Example:

The client limit for the throttle group 'Quotes' is 5 requests per second. The client wants to send 20 req/sec (every 50 ms):



The request at 300ms is throttled. The client handles the fault and waits for Δt interval of 200ms. The request at 500ms passes. If the client continues sending 20 req/sec, the requests will be throttled (e.g. at 350ms) unless the client sends one request during each Δt interval or has a longer period of inactivity.

52.2 Advanced Way of Handling Throttling Exceptions

A client may choose to maintain a counter for each throttle group that their solution works with and to calculate a minimum delay before the next request in order to avoid being throttled. This approach ensures maximum responsiveness of the client's solution.

This solution requires that counter C_n is calculated after each request. The initial value of the counter equals $C_0=0$.

The client is advised to send the next request after the minimum interval of Δt seconds since the last sent request:

$$\Delta t \geq \frac{(C_n + 1) - \text{limit}}{C_n}, \text{ if } C_n \neq 0;$$

$$\text{and } \Delta t \geq 0$$

After sending the request, the counter is updated:

$$C_{n+1} = C_n \times (1 - \Delta t) + 1, \text{ if } \Delta t \leq 1 \text{ second};$$

$$\text{or } C_{n+1} = 1, \text{ if } \Delta t > 1 \text{ second}$$

The same statement is also true for this approach:

A client will not be throttled by the TRKD API if the interval between requests is longer than Δt .

Example:

The client limit for the throttle group 'Quotes' is 5 req/sec. The client wants to send 20 req/sec (every 50 ms):



Calculating Δt after the request at 250ms gives ~116ms. The client waits for Δt interval and sends the next request at 366ms. By doing so, the client avoids a throttling exception. For the next request, the updated value of Δt is 0.2ms and it will remain the same until the client has a longer period of inactivity.



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